ESSAYS ON BUSINESS GROUPS AND THE JUDICIARY IN SOUTH KOREA

by

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The first chapter explores how the size of a corporation undermines a court's willingness to mete out tough sentences to corporate criminals, employing a unique dataset of Korean white-collar offenders. I find that the Korean judiciary displays a strong bias towards *chaebols*, family business groups: the likelihood that convicted *chaebol*-related defendants receive suspended jail sentences rises compared to that of convicted non-*chaebol* counterparts. The finding further shows that a greater bias can be observed for the top 10 business groups than for any of the lower ranking *chaebols*. Finally, I show that controlling for the in-group transactions, the bias is significantly diminished, which is consistent with the claim that a civil-law allows substantial expropriation of minority shareholders by weighing business group's interests.

The second chapter empirically investigates whether connections influence judicial decisions. Using data on Korean white-collar criminals, I investigate whether the judiciary favors newly retired senior judge attorneys (called "Revolving door attorneys") by giving their clients light criminal sanctions. I find that convicted white-collar offenders defended by Revolving door attorneys are more likely to receive suspended jail terms than those represented by ordinary attorneys. I find that the impact is discontinuous after the first year of departure from the judiciary: former senior judge attorneys who represent cases more than one-year after retirement do not alter the likelihood of leniency for clients. Lastly, I find that observed leniency disappears

when cases become subject to media scrutiny, which suggest causal linkage between connections and lenient criminal penalties.

The final chapter presents a CEOs' career-concerns model for the formation of business groups by focusing how different corporate structures induce CEOs to signal their talent to markets. The paper shows that with better legal protection of investors and an efficient monitoring system for firms' performance, CEOs can increase rents by choosing business groups. Why? Since they manage the subsidiaries of business groups, they have multiple channels (i.e., each firm in the groups) where they signal their ability to other shareholders relative to a large firm with multi-divisions. This leads CEOs to be less responsive to market pressure.

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PREFACE

Though only my name appears on the cover of this dissertation, a great many people have contributed to its production. I owe my gratitude to my committee, Dr. Thomas Rawski, Dr. Luca Rigotti, Dr. Werner Troesken, and Dr. Kevin Morrison who have made this dissertation possible.

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1.0 INTRODUCTION

This dissertation investigates the interaction between economic organizations and judicial behavior. Finance and economics literature has highlighted how legal systems affect financial performance of firms. However, little of the literature has been devoted to how a specific form of economic organization affects and even biases judicial judgment and as a result, how the judiciary helps facilitate the organizations, especially in Korea where large family business groups dominate the national economy.

The first chapter explores how the scale of a firm can hurt a court's willingness to mete out tough sentences to corporate criminals, using a unique dataset of 252 convicted high profile Korean white-collar offenders. I find that the Korean judiciary displays a strong bias towards *chaebols*, family business groups ("*chaebol* bias"). The probability that convicted *chaebol*-related defendants receive suspended jail sentences rises by 9.9 percentage points compared to convicted non-*chaebol* counterparts. In addition, convicted *chaebol*-connected defendants receive jail terms shorter by on average 18 months. Leniency remains robust after controlling for several sentencing factors, particularly the quality of defense attorneys.

To investigate the source of this *chaebol* bias, I examine two testable hypotheses. The first is that, given the size of *chaebols*, lighter criminal sanctions are inevitable, amounting to a

too-big-to-jail situation ("size hypothesis"). Our evidence supports the size hypothesis: a greater the bias can be observed for the top 10 business groups than for lower ranking *chaebols*.

The second, the "civil law hypothesis," attributes observed leniency to judicial reluctance to constrain, in civil law jurisdictions, in-group transactions. We show that controlling for in-group transactions significantly diminishes the *chaebol* bias. Especially for mid-sized *chaebols* (i.e., below top 10 *chaebols*) the inclusion of an In-group Transaction dummy removes the *chaebol* bias. This finding is consistent with the well-known claim that civil-law courts allow business group's interests to justify substantial expropriation of minority shareholders. In sum, I attribute the *chaebol* effect to judicial concerns for economy-wide consequences of harsh sentences against *chaebols* and judicial hesitancy in civil law to limit in-group transactions.

The second chapter highlights revolving door phenomena in the judiciary to examine if connections affect the behavior of the judiciary. Using a data set of 270 high-profile Korean white-collar criminals, I investigate whether the judiciary favors newly retired senior judge defense attorneys ("*Revolving door attorneys*") by giving their clients light criminal sanctions (e.g., suspended jail terms) in Korea.

To distinguish connections from skills of *Revolving door attorneys*, I exploit the length of retirement of former senior judge counsels as a source of exogenous variation in connections. Particularly, I hypothesize that preferential treatment granted to lawyers with senior judge experience substantially decays after one year of their retirement. I find that judicial connections have a sizable impact on sentences: convicted white-collar offenders defended by *Revolving door attorneys* are more likely (by around 15 percentage points) to serve suspended jail terms than those represented by ordinary attorneys. I also find that the impact is discontinuous after the first year of departure xz cfrom the judiciary: former senior judge attorneys who handle cases more

than one-year after retirement do not raise the likelihood of leniency for clients. Lastly, I find that observed leniency disappears when cases become subject to media scrutiny. These findings cannot be traced to any particular expertise or efforts of RDAs, which suggests causal linkage between connections and lenient criminal penalties

The prevailing view of business groups is that the groups serve as substitutes for financial and labor markets that emerging countries often lack. This view regards business groups as a mechanism through which intra-group transaction costs are lowered. This argument sounds appealing, but fails to explain why business groups are prevalent in some developed countries with relatively well-functioning markets.

This is the starting point of the third chapter. The chapter builds on CEOs' career-concerns model to explain the formation of business groups by focusing how different corporate structures induce CEOs to signal their talent to markets and affect shareholders' learning procedures for CEO's intrinsic ability. This paper offers theoretical explanations as to how monitoring and disciplining of a CEO in a conglomerate differs from that of a business group's CEO. In this paper, we especially compare turnover of a CEO of a business group to turnover of a CEO of a comparable conglomerate. Under a specific circumstance where a market for CEOs places a heavy emphasis on general managerial talent rather than firm specific expertise (in out context, CEO's firm-specific talent is highly correlated), replacement of a CEO of a business group seems to be less sensitive to poor performance of at least one of affiliates of the group.

A conglomerate structure, however, is not always better at disciplining and monitoring a CEO. A diversified conglomerate tends to be more opaque than a business group because a conglomerate usually offers information on aggregate performance that contains limited information about talent of its CEO. This implies that firm performance is a noisier signal of

talent, allowing a CEO to extract high rents from a conglomerate. In conclusion, CEOs' organizational choices are determined the parameter values used in the model: protection of outside investors and diversification, and precision of monitoring of CEOs.

2.0 TOO BIG TO JAIL: SENTENCING BIAS FOR BUSINESS GROUPS

2.1 INTRODUCTION

This paper explores whether mega-sized firms can bias the legal system and, if so, where such bias comes from. To answer these questions, we conduct quantitative and qualitative studies of sentencing outcomes for 252 high-profile, convicted corporate offenders in Korea. Why study Korea? Korea offers an ideal environment to study how judicial behavior differs according to an offender's socio-economic status. Korea's judiciary is notorious for leniency towards corporate offenders, especially ones tied to large family business groups, known in Korea as *chaebols*. Take, for instance, Lee Gun-Hee, the chairman of Samsung Group, Korea's largest business group. In April 2008, Mr. Lee resigned his post after being charged with tax evasion and breach of fiduciary duty. Korea's judiciary, in August 2009, gave him a slap on the wrist—a three-year suspended jail sentence. By Christmas of that year, President Lee Myung-bak pardoned him, clearing the way for his return to his former post in March 2010. A tycoon convicted of multiple felonies was able to return to power in less than two years.

As another example, consider Jeong Mong-goo, the chairman of Hyundai Motor group (owner of Kia, the country's second-largest carmaker). In 2006, he faced criminal charges of embezzlement and self-dealing. A lower court sentenced him to three years in prison but an appellate court, giving weight to his contribution to the national economy, suspended the sentence and demanded a $1 billion donation to charity instead. In August 2008, he too was pardoned.

These two examples illustrate a systemic problem with Korea's judiciary: hesitancy to harshly punish offenders whose companies are "too-big-to-jail." As the size of a firm (or business group) connected to a defendant grows so does the likelihood of leniency. As the Financial Times put it, "[I]f Jeffrey Skilling, the former Enron chief executive, was South Korean, you could imagine him back at his desk, taking key decisions." [1] This tendency contributes to Korea discount, the undervaluing of Korean stocks by foreign investors.

The other reason for zeroing in on Korea is that studies of Korean corporate crimes give a clear picture of how civil law addresses outlawed self-dealing, especially self-dealing within business groups aimed at benefiting controlling shareholders. Many studies (Khanna and Palepu 2000; Morck 2007) show that in countries where business groups are prevalent, related-party transactions that expropriate minority shareholders for the benefit of controlling shareholders are common. Many corporate governance studies (López de Silanes et al. 1999; López de Silanes et al. 2000; Djankov et al. 2008) claim that the regulation of self-dealing transactions varies substantially across legal origins; civil law is generally less protective of outside investors and minority shareholders.

While existing studies focus on private enforcement against self-dealing such as legal arrangements and civil litigation, little attention has been paid to public enforcement, especially the role of criminal courts in constraining self-dealing. This is mainly due to a lack of credible data (Djankov et al. 2008). In this respect, Korea is relatively rich in data. Especially after Korea's 1997 financial crisis, prosecutors vigorously brought self-dealing cases to court,

[1] Oliver, Christian. "The Korea discount: blame the businessmen." *Christian Oliver*: *beyondbrics*. Financial Times, 31 August 2010. Web. 22 April 2014.

producing more than 250 convictions. The abundance of Korean data fills this gap, allowing us to analyze how the Korean criminal courts, an example of civil law jurisdiction, perceives and disciplines related-party transactions. To our knowledge, this paper is the first attempt at investigating sentencing disparities between business group members and ordinary white-collar criminals, and also exploring how civil law systems address self-dealing in their criminal courts. What makes this study unique is our dataset. Using news articles, court decisions, and electronic legal resources, we construct a unique dataset of sentencing outcomes for 252 convicted corporate offenders, most of whom committed outlawed self-dealing. The white-collar criminal cases that we analyze here concern large-scale corporate scandals that involve Samsung, Hyundai Motor Car, and SK Group. All crimes occurred between 1993 and 2006 and were adjudicated between January 2000 and June 2007 in Korea.

The paper is the first empirical paper to confirm too big to jail in the judiciary: we find that Korea's judiciary exhibits a strong bias towards *chaebols* (henceforth, the "*chaebol* bias"). The odds of imprisonment for convicted *chaebol*-connected defendants are 10.1 percentage points less than for ordinary regular white-collar criminals. The likelihood that criminals are held in pre-trial custody drops by 24.6 percentage points when they work for a *chaebol*. In addition, convicted *chaebol*-tied defendants serve shorter (by 18 months on average) prison terms even when they are held in jail. Moreover, we find that preferential treatment for *chaebols* remains robust even after controlling for the quality of legal representation. Whatever measures we take of the quality of defense attorneys, the judiciary is more likely to hand down lenient sentences to convicted *chaebol*-connected defendants. In short, we find strong evidence of *chaebol* bias.

What drives the bias? To answer this question, we examine two testable hypotheses. The first hypothesis is that owing to the size of *chaebols,* lighter criminal sanctions are inevitable.

Our evidence supports this size hypothesis: for the top 10 business groups, the bias is stronger than for *chaebols* outside this ranking. Specifically, compared to convicted non-*chaebol* defendants, jail sentences for convicted *chaebol*-related defendants are more likely, by 10.1 percentage points, to be suspended. For defendants related to a top-10 *chaebol*, the gap widens to 11.2 percentage points, but for those connected to smaller *chaebols*, the difference narrows to 8.7 percentage points. In sum, observed leniency is largely driven by top 10 *chaebol*s, confirming that 'too-big-to-jail' is a judicial version of 'too-big-to-fail.'

The second hypothesis is the "civil law hypothesis," suggesting observed leniency can be attributed to the reluctance of judges in civil law jurisdictions to limit self-dealing in *chaebols* (López de Silanes et al.1997; López de Silanes et al.1998; Djakov et al.2008) . An extensive review of sentencing opinions reveals that for *chaebol* cases, the judiciary widely accepted "no-private-gain" defenses, that a criminal acquired no direct private gain from crimes in question because the crimes generally involved in-group transactions that were designed to facilitate the interests of a whole business group (e.g., such as for propping troubled affiliates in the group). We also show that controlling for in-group transactions significantly diminishes the *chaebol* bias. Especially for mid-size *chaebols* (i.e., below top 10 *chaebols*) the inclusion of an In-group Transaction dummy nullifies the bias.

These findings can be interpreted as evidence that Korea's judiciary maintains a dual standard in assessing the degree of illegality of self-dealing; when crimes involve related-party transactions, especially for propping up a troubled *chaebol* subsidiary, courts rule that the crimes deserve less condemnation because the crimes facilitate the interest of a *chaebol* as a whole. This attitude ends up sanctioning lighter sentences for *chaebol*-related offenders, and seriously weakens the deterrence effect of criminal punishment against self-dealing. This interpretation is

consistent with the well-known tendency of civil-law courts to allow substantial expropriation of minority shareholders.

"...in civil-law countries, the expropriation of minority shareholders by the controlling shareholder in a transaction with a plausible business purpose is often seen as consistent with director's duties, especially if the controlling shareholder is another firm in the group." (López de Silanes et al. 2000 p 26, emphasis added).

Overall our findings suggest that the *chaebol* bias has two sources. One source involves concerns for the economy-wide impact of harsh sentences against *chaebol*-related offenders. The other is a reluctance of civil law courts to strictly regulate in-group transactions to protect outside investors.

Many law and finance studies view legal systems as the main determinants of ownership structures and financial markets in specific countries (López de Silanes et al. 1998; Porta et al. 1999; Demirgüç-Kunt and Maksimovic 1998; Rajan and Zingales 1998; Beck, Demirgüç-Kunt and Levine 2003). Among this line of research, López de Silanes et al. (2000) and Djankov et al. (2008) are closely related to our work. Our research, in exploring the interaction between law and finance, shows how Korea's criminal courts, as one of external governance mechanisms, address case involving the expropriation of minority shareholders. In several aspects, our work complements and adds to these two works. To begin with, their key examples involve civil procedures, whereas our work addresses criminal procedures. While their work mainly depends on anecdotal evidence or hypothetical self-dealing cases, ours rest on a systemic analysis of judicial adjudications of actual self-dealing. Moreover, in contrast to their focus on legal tunneling, our work is devoted to outlawed tunneling; our work highlights the specific role of

criminal courts in limiting self-dealing and the reason civil-law criminal courts are lenient of expropriation of minority shareholders by a controlling shareholder.

Our work also offers a plausible answer to the puzzling question raised by Djkanov et al. (2008) as to why public enforcement is unrelated to more developed stock markets. They argue that the measure of public enforcement, that is, the severity of punishment prescribed by rules, is incomplete because it does not reflect actual law enforcement data. Our work confirms their conjecture that what matters in the regulation of self-dealing are actual judicial actions, not nominal statutes on the books. Without understanding the judicial stance regarding business groups demonstrated here, it is hard to explain the recurrence of corporate scandals in emerging markets where nominal statutes state that self-dealing transactions are unlawful and severely penalized (life in prison in Korea).

Our work also contributes to the literature on sentencing outcomes for white collar crimes. Recent studies of sentencing disparities between white-collar criminals and other types of offenders have in large part stressed the identification of substantial offender characteristics, e.g. race/ethnicity and class (Hagan et al., 1980; Schanzenbach and Yaeger 2006). Focusing on the sentencing disparities among white-collar offenders, our study investigates the position of power (that is, disparities between a controlling shareholder and top management or between *chaebol* and non-*chaebol* offenders). Moreover, we make methodological contributions to the analysis of white-collar crimes. Posner and Yoon (2010) claim 20-40% of criminal cases are plagued with recognizable disparities in quality of legal representation. By establishing reliable measures of such quality, we can control for the impact of legal representation on sentences. Such control would allow for a better understanding of whether sentencing disparities result from socioeconomic status.

The paper is organized as follows. Section 2.2 explains the historical and institutional backgrounds required to understand our work. Section 2.3 describes how we construct a data set. Section 2.4 details the variables and regressions to be reviewed. Section 2.5 advances the summary statistics and descriptive analysis of the main variables of the dataset. Section 2.6 presents quantitative results. Section **2.7** provides in-depth analysis of the results and examines the source of observed leniency. Section 2.8 concludes and advances projects for future research.

2.2 HISTORICAL AND INSTITUTIONAL BACKGROUND

2.2.1 *Chaebol*

Many studies (Bertrand and Schoar 2006, Bennedsen, Pérez-González, and Wolfenzon 2010) illustrate that corporate governance works quite differently in firms with and without controlling shareholders. The primary governance problem of the former takes the form of "tunneling" where a powerful insider expropriates minority shareholders for its private gain (López de Silanes et al. 2000). Since *chaebols* are the Korean version of business groups controlled by wealthy families, this general description readily applies to *chaebols*.

Chaebols play a dominant role in Korea's national economy. Since the 1960s, they have received a considerable amount of government support. As a consequence, they have been the driving force of rapid economic growth in Korea. Table 2-1 illustrates that *chaebols* contribute vastly to the Korean economy. Over time, the total sales and assets of the top 30 *chaebols* continue to grow. In 1980, the total sales of the top 30 business groups accounted for 60.6% of

GDP; in 2011, that number had ballooned to 96.7%. From 1980 to 2011, the total asset/GDP ratio went from 52.9 to 124.5%.

Table 2-1 The Top 30 *Chaebols* in Korea

Year	Total Assets (A)	Total Sales(S)	Total No. of Affiliates	Average No. of Affiliates	GDP	A/S*100	S/GDP *100
1980	20.7	23.7	417	13.9	39.1	52.9	60.6
1987	56.6	84.9	509	16.4	100.2	56.5	84.7
1991	125.3	231.3	570	19.0	191.3	65.5	120.9
1995	233.4	345.0	623	20.8	349.9	66.7	98.6
1999	463.5	479.3	686	22.9	501.0	92.5	95.7
2001	564.6	510.1	624	20.8	603.2	93.6	84.6
2006	770.0	629.4	645	21.5	865.2	89.0	72.7
2011	1460.5	1134.0	1019	34.0	1172.8	124.5	96.7

Note: Computed by the author using data of Korea Free Trade Commission. GDP is measured by 2005 constant year price. A unit is KW 10 trillion (approximately USD 10 billion) and %, respectively.

Family firms like *chaebols* usually adopt control-enhancing mechanisms such as pyramids or cross-holdings (López de Silanes et al. 1999; Claessens et al. 2000; Faccio and Land 2002). These mechanisms separate cash flow rights from control rights, enabling a handful of family members to make key management decisions. Thus, these family members are able to govern major segment of a country's corporate sector (López de Silanes et al.; Claessens et al. 2000; Morck, Wolfenzon, and Yeung. 2004). A dominant shareholder generally holds the position of chairman or president of a business group; a top manager holds the position of the CEO or director of an affiliate in the group. Whatever name he goes by, the dominant shareholder makes the key decisions of the affiliates. Before Asia's 1997 financial crisis, outside directors never sat on a company's board; hostile takeovers were practically unheard of in Korea. Such absence of internal and external discipline mechanisms enables controlling shareholders to

exercise virtually absolute power and reap private benefits at the expense of minority shareholders. Finally, *chaebols* seek, through several channels, to extend their influence on society. They appoint politically connected directors (Solidarity for Economic Reform 2009); they establish charity foundations (Solidarity for Economic Reform 2010); they found think tanks aimed at disseminating business-friendly ideologies. As a consequence, *chaebols* exercise immense influence. They seem ubiquitous and even omnipotent. Some satire their almighty power as follows "[i]t has become possible to live a Samsung-only life: You can use a Samsung credit card to buy a Samsung TV for the living room of your Samsung-made apartment on which you'll watch the Samsung-owned pro baseball team." [2]

2.2.2 Judiciary Selection Process in Korea

Another institutional background required to understand our work is Korea's judicial selection processes: appointment by the judiciary (or by the administration in the case of a public prosecutor). The understanding of the judiciary selection procedure is the key to the construction of reliable measures of the quality of defense attorneys.

Those who want to pursue judicial careers must pass an entrance exam (the National Judicial Examination). Tiny allotments make the exam highly competitive. Over the last two decades, less than 1 out 20 (4.3%) applicants pass the exam. Successful candidates receive two years of training at a special educational institution managed by the judiciary (called Judicial

[2] Harlan, Chico "In South Korea, the Republic of Samsung." *The Washington Post* December 9, 2012; Print.

Research and Training Institute, JRTI). The training program is mainly aimed at enhancing technical skill and legal knowledge required to address legal problems. Once they complete their training, candidates with the highest grades are allowed, in principle, to choose the available position they desire. They may take jobs in on the bench, in the district attorney's office, or in private practice.

Since the judiciary offers prestige and power, candidates with the highest grades tend to pursue judicial careers. Approximately the top 30% of the candidates are entitled to serve in the judiciary or as public prosecutors. Judges are generally drawn from the group of highest performers, and prosecutors from the next highest performers. The rest of the candidates start to practice law in private law firms or private companies. Korea judiciary features civil law jurisdictions in which the Supreme Court appoints judges at a young age, rotating them through a variety of posts. No judges, even the Supreme Court justices, are appointed for life; none is elected. A newly appointed judge generally needs 15 years of experience to be elevated to a senior judgeship of each judicial panel in a district court (*jibub-bujang-pansa*), the next posting on the hierarchical ladder in the judiciary. To become a senior judge of a panel on a high court (*gobub-bujang-pansa*) requires on average another 10 years (for judicial structures in Korea, see Table 2-2).

Most junior judges eventually become district court senior judges. Their career-mobility prospects, however, diminish significantly as the senior judges get closer to the upper posts of the bureaucratic ladder. In practice, not all the district court senior judges can move to the hierarchical ladder's next step, high court senior judges. High-profile judges, especially senior judges, tend to leave office prior to their retirement if they fail to be promoted.

Table 2-2 Total Number of Judges in Korea by Ranks (as of 2013)

	Ranks	Number (%)
Justice	Supreme Court Justice	14 (0.5)
Chief Judge	High Court (or Patent Court) Chief Judge	6 (0.2)
	District Court (or Administrative and Family Court) Chief Judge	24 (0.8)
Senior Judge	High Court (or Patent Court) Senior Judge	117 (4.1)
	Branch Court Senior Judge	39 (1.4)
	District court (or Administrative and Family court)Senior Judge	473 (16.6)
Junior Judge	Law Clerk of Justice	105 (3.7)
	High Court (or Patent Court) Junior Judge	205(7.2)
	District Court (or Administrative and Family Court) Junior Judge	1875 (65.6)
	Total	2858 (100.0)

Notes: Data for Table 2-2 from Bub-won-jo-jik-bub *(The Judicial Organization Act).*

Early retirement is very common in Korea's judiciary. Since 1990, only 20 judges (for prosecutors, only 5) remained in office up to retirement age. This accounts for 1.3% (0.7%) of 1519 (1353) retired judges (prosecutors) during the same period. After resignation, retired judges (or prosecutors) enter private practice. Their most likely post-retirement job is to practice law in law firms, often as criminal defense attorneys. Taken overall, judicial careers of a defense counsel (including those of public prosecutors) can be indicative of its talents and skills. Motivated by these observations, we constructed several proxies related to the quality of defense attorneys, one of key variables.

2.3 DATA DESCRIPTION

2.3.1 Definition of White-Collar Crimes

The white-collar crimes in our sample correspond to embezzlement and breach of fiduciary duty in Korea's criminal code (article 356), which is roughly equivalent to 18 U.S.C. §1341 (Frauds and Swindles) or 18 U.S.C. §1343 (Fraud by wire, radio, or television). Bank and accounting fraud cases are included in the sample only when the fraud occurred together with embezzlement and breach of fiduciary duty. The offences analyzed here can be categorized as tunneling, and can be further divided into four sub-groups: (1) outright theft of corporate assets by a controlling shareholder ("embezzlement'') (2) self-dealing transactions aimed at directly benefiting a controlling shareholder ("narrow self-dealing transactions") (3) self-dealing transactions aimed at propping up other affiliated firm within a business group ("in-group transactions") (4) accounting fraud. The key difference between "narrow self-dealing transactions" and "in-group transactions" lies in the specific form of transactions in question. For "narrow self-dealing transactions", a controlling shareholder is a direct beneficiary of self-dealing. In contrast, "in-group transactions" occurs between a parent company and its subsidiary (or between subsidiaries). "Narrow self-dealing transactions" generally include 1) sales of goods or services to the company at inflated prices, 2) purchases from at excessively low prices, 3) loan to or from the company on advantageous terms" (Nenova and Hickey 2006). "In-group transactions" include 1) the subsidiary's support of its parent by purchasing goods from the parent at non-market prices, 2) guaranteeing its parent's debt, 3) making loans without proper collateral. The "in-group transactions" indirectly serve the interests of controlling shareholders

by retaining (or reinforcing) their control over a business group. This taxonomy will be relevant when we discuss a sentencing bias in favor of *chaebols*.

2.3.2 Data Sources

We constructed a unique criminal-level dataset. The dataset contains 252 white-collar offenders. They committed crimes between 1993 and 2006 and were adjudicated between January 2000 and June 2007 in Korea. The dataset involves several high-profile corporate fraud cases such as Samsung, Hyundai Motor Company, and SK group. All our cases resulted in convictions in Korea's lower and high courts.

About 40% of corporate crimes in our sample occurred around Korea's 1997 financial crisis. The crisis was triggered in part by a number of *chaebols*' unforeseen bankruptcies. To prevent system risk to the national economy, the Korean Government had no choice but to come to the aid of insolvent financial institutions. Following their bailout, the government investigated those responsible and took them to court.

In response to the public wrath against conglomerates, the government launched a task force aimed at investigating and charging prominent individuals such as *chaebols'* controlling shareholders and CEOs of *chaebols'* subsidiaries. Our representative example is Daewoo, at the time the second largest business group. In 1999, the group collapsed under the weight of debts totaling more than $80 billion. Its founder, Kim Woo-jung, fled the country and was on the run for six years. The collapse of Daewoo inflicted enormous damage: its lenders, several large banks almost went bankrupt, thousands were laid off, and myriad lives disrupted. The task force charged Mr. Kim and seven of his lieutenants with violating criminal statutes.

Compiling such a dataset was a laborious undertaking; law enforcement authorities maintain no centralized record on such criminals, much less offer them up. We constructed the dataset using three distinct sources.

2.3.2.1 NGO reports and News Coverage

We were first guided by a series of special reports released by People's Solidarity Participatory Democracy (PSPD) and Solidarity for Economic Reform (SER), civic watchdogs dedicated to monitoring corporate fraud in Korea. Their reports contain detailed information on small number of high-profile corporate crimes. We then turned to news coverage. Our samples were selected from newspaper articles published between 2000 and 2007. We used the string {"embezzlement OR breach of fiduciary duty" "court decisions OR sentencing"}, where embezzlement and breach of trust corresponds to penal codes in Korea. While effective at constructing an extensive dataset, such maneuver has two drawbacks. First, for cases with multiple defendants, the media tends to deal with the highest-profile defendants only; we may have overlooked a number of defendants. Second, some news articles may have errors in reporting. More accurate and credible sources are court decisions discussed below.

2.3.2.2 Judicial Decisions

The written decisions we examine here are full-dress opinions. An extensive review of them produces considerable information required to build a unique dataset. We mainly highlight the criminal's standing; is he involved with an affiliate of a conglomerate; is he a dominant

shareholder or top management? We also identify various factors related to criminal conduct from court decisions; the amount of losses criminals inflicted on victims, and compensation for the losses. These factors may be predictive of sentencing outcomes because the Supreme Court issues a guideline with which lower-courts should comply when determining sentences. A standard measure for the seriousness of economic crimes is the size of monetary losses. Another decisive component is whether a criminal monetarily redeems the losses. The comprehensive examination of sentencing opinions is one of the unique aspect of our analysis. Compared with the U.S., the Korean judiciary describes in detail what factors it considers when determining sentences -- from a couple of paragraphs to several pages. Opinions touch upon not only aggravating factors but also mitigating ones. We draw attention to several of the latter.

2.3.2.3 Internet Legal Resources

To track defense attorneys' careers, we relied on Lawnb (http://www.lawnb.com), Korea's version of Westlaw and Lexis. Through Lawnb, we were able to access career paths of the defense attorneys: when a defense lawyer passed the entrance exam; whether he/she is a former judge (or prosecutor) or not; what positions he/she held; whether he/she is a top-10 law firm's lawyer, which are key factors when measuring the quality of legal representation. Finally, we hone in on crimes of controlling shareholders and top management. Mid-level managers' misdeeds are outside the scope of this study.

2.4 VARIABLE DESCRIPTION AND REGRESSION EXPLANATION

2.4.1 Dependent Variables

One of our primary dependent variables is a court's decision to suspend a prison term. The variable *Imprisonment* is a dichotomy; taking on 1 if a convicted defendant receives a prison term and 0 if he/she receives a suspended one. Why do we highlight suspension of a sentence rather than acquittal? For those convicted of white-collar offenses, a suspension of jail terms is tantamount to acquittal in Korea for several reasons.

First, the Korean criminal justice system has few public officers to supervise all those who received suspended sentences. Accordingly, it is highly unlikely that suspended sentences will be resumed even if the offender violates his terms. Second, as noted in the Samsung case, controlling shareholders face few hurdles to returning to management as long as they receive suspended sentences. Moreover, even though a trial judge may be biased towards a *chaebol*, judges are highly unlikely to release a guilty defendant. Should judges do so, high courts could reverse the lower court decision. Therefore what is more likely is that a biased judge orders a suspended prison sentence. Moreover, a judge can exercise a considerable amount of discretion over sentencing as long as sentencing outcomes fall within the range prescribed by the law. Such exercise of discretion is seldom subject to a judicial review in an appeal court.

Another dependent variable we underscore here is a pre-trial status of offenders. The variable *Pre-trial Detention* is also a dummy variable, taking on 1 if a defendant is under pretrial custody and 0 otherwise. By exploring pretrial detention outcomes, we can have a sense of not only how the judiciary addresses corporate crimes but also how investigating authorities deal

with white-collar crimes during pre-trial procedures. This approach makes sense because a prosecutor exercises vast discretion in deciding whether a suspect is put under detention and what charges to bring if the prosecutor decides to seek an indictment. Moreover, the Korean criminal justice system has no equivalent of grand jury indictments, suggesting that a prosecutor holds exclusive authority over whether to drop a case.

The last dependent variable is *Length of Imprisonment*, a continuous variable. By "imprisonment" we mean time spent in confinement. If a defendant receives a suspended jail term, the length of imprisonment is zero. As explained above, since suspended jail terms are essentially equivalent to acquittal, when evaluating the severity of punishment it seems reasonable to regard these cases as having no imprisonment.

2.4.2 Explanatory Variables

In our sample, a criminal's standing can be broadly separated by a cross measure of a *chaebol* and a controlling shareholder.

1. *Chaebol*: The literature provides various definitions of a *chaebol* (mainly family business group (Granovette 1995; Khanna and Rivkin 2001). For the clarity of analysis, however, we choose the administrative definition. For regulatory purposes, Korea Free Trade Commission (KFTC) has publicly announced a list of *chaebols* each year since 1987. The criterion has evolved. From 1987 to 2001, KFTC annually ranked the top 30 *chaebols* based on the size of their total combined assets of all affiliates. Since 2002, KFTC has employed a new standard in which a *chaebol* is any business group with the total combined assets of its affiliates surpassing approximately KW 5 trillion (approximately USD 5 billion). KFTC requires *chaebols*

to disclose such information as the identity of a controlling shareholder, their structures and affiliates' financial statements. All information can be publicly available through a website.[3]

The variable *chaebol* takes on 1 if a firm that a convicted defendant is connected with is a *chaebol*'s affiliate, and otherwise 0. Note that small- or medium-sized family-controlled firms are also pervasive in Korea. Accordingly, even when a firm of our sample is not a *chaebol* affiliate, the firm can be still under the control of a specific family. In other words, even if the firm is not a constituent firm of a *chaebol*, it may have a controlling shareholder.

2. *Controlling Shareholder*: A controlling shareholder owns enough outstanding shares to control a firm. KFTC identifies controlling shareholders of *chaebols*—generally a founder or his family members. The family members are placed as top management such as the CEO or CFO of an affiliate (Morck, Wolfenzon, and Yeung 2004). In this case, we still classify him as a controlling shareholder, not as top management. In other words, top executives in our sample refer to ones without any blood ties to founders. The variable *Controlling shareholder* takes on 1 if a defendant is the controlling shareholder or the controlling shareholder's family members, and 0 if a defendant is a high-ranking non-family executive.

3. *Amount of Losses*: In corporate fraud, the seriousness of a crime essentially depends on the amount of monetary losses. The losses serve as one of the most critical factors when determining a defendant's sentence. The losses are generally measured by the money value of harm that a court rules a defendant to have caused. Through extensive readings of court decisions, we can confirm the amount of losses that corporate fraud offenders inflicted. However, to some degree, it is an operative task to confirm the losses incurred by criminal

[3] http://groupopni.ftc.go.kr/index.jsp

conduct (Richman 2012). For a case with multiple defendants, the total amount of monetary losses is attributed to all of them. This implies that all defendants convicted of the same crime should be jointly responsible for the loss as a whole. This corresponds to sentencing practices in a trial court, where each defendant is held accountable for all the losses incurred by his criminal conduct. In this paper, the variable Amount of Losses is a log of [the monetary losses+1] that a defendant causes a firm.

4. *No Compensation*: The fact that defendants compensate victims monetarily is also considered a sign, like a guilty plea, of their accepting responsibility for offenses. This suggests that compensation of losses is one of the most important mitigating factors. The variable *No Compensation* takes on 1 if incurred losses are not fully restored and otherwise takes on 0.

5. *Quality of Legal Representation*: This paper presents three measures in order to evaluate the legal representation available to defendants.

1) *NL*: This measure is, by nature, a continuous variable. While the size of a defense team is a natural indicator of the quality of legal representation, it is still an imperfect measure. The heterogeneous abilities of attorneys should be considered. Following measures consider such heterogeneities.

2) *Top10L*: The second measure is whether a defendant hires one or more from a top-10 law firm. These elite law firms have resources and many experts specializing in criminal law, which may lead to more leniency for defendants. The binary variable *Top10L* takes on 1 if a top-10 law firm is involved and 0 otherwise.

In addition, we set out another measures of the quality of legal representation, measures closely related to how Korea selects its judiciary. As explained above, the careers of judges (or public prosecutors) can provide reliable information about the talent of defense lawyers.

3) *HPL*: This binary variable takes on 1 if a defense lawyer was a senior judge (or public prosecutor) in at least a district court. Note that these respective measures are not mutually exclusive; 3) is a subset of 1).

6. *Instance*: Appeal courts tend to cut sentences of lower courts about top management cases without substantial changes in facts or evidence. To capture this effect on sentences, the variable *Instance* takes on 1 if a trial court is an appellate court, and on 0 if a lower court. This effect can be interpreted as one type of fixed effect.

Table 2-3 Variable Definitions

Variable	Definition
Imprisonment	1 if a convicted defendant is actually jailed, and 0 if he/she receives a suspended jail term
Pre-trial Detention	1 if a defendant is under pretrial custody, and 0 otherwise
Length of Imprisonment	The length of actual confinement of a convicted defendant when he/she is found guilty
Chaebol	1 if a firm for whom a convicted defendant works is affiliated with c*haebol,* and 0 otherwise
Controlling Shareholder	1 if a convicted defendant is a founder or is a member of founding family, and 0 if he/she is non-family management (e.g. CEO or CFO)
Amount of Losses	ln (Monetary losses which a defendant inflicts on a firm+1)
No Compensation	1 if losses from crimes are not fully restored , and 0 otherwise
Instance	1 if a trial court is an appeal court, and 0 if the court is a lower court
New Chief Justice	1 if a case was sentenced after 2005, and 0 otherwise
Region	1 if regional jurisdiction is Seoul, and 0 otherwise
NL	The total number of defense lawyers that each defendant hires
HPL	Defense lawyer with senior judge (public prosecutor) experience
Top10	Defense lawyer of a top 10 law firm
HPL_Dummy	1 if one of the defense attorneys is *HPL*, and 0 otherwise
Top10_Dummy	1 if one of the defense attorneys is *Top10* and 0 otherwise

Note: "Senior public prosecutor" includes the prosecutor general, a chief of high (district) public prosecutor's office, and high (district) court senior prosecutor.

2.4.3 Regression Equation

We present three regressions. The aim of the first regression is to see how courts address corporate fraud offenders; the second is to mainly examine how investigatory authorities and courts deal with such offenders, especially during pre-trial proceedings; the last one involves the intensity of criminal sanctions against white collar offenders. The examination of these regressions allows us to get a general view of how the Korean criminal justice system addresses white collar criminals.

The first and second regressions will be run with a probit model. They use nearly identical independent variables except that the second ignores whether a criminal compensates victims monetarily. This configuration is reasonable because compensation is generally made before a verdict is reached, rather than before a trial is begun. At the time of deciding pre-trial detention, public prosecutors and magistrates take no account of compensation.

$$Imprisonment = a + b_1\ Chaebol + b_2\ Controlling\ Shareholder + b_3\ No\ Compensation + b_4\ Amount\ of\ Losses + b_5\ Quality\ of\ Legal\ Representation + b_6\ Instance + e$$

$$Pretrial\ Detention = a + b_1\ Chaebol + b_2\ Controlling\ Shareholder + b_3\ Amount\ of\ Losses + b_4\ Quality\ of\ Legal\ Representation + e$$

The third regression investigates the duration of actual confinement, a continuous variable. This will be analyzed using a Tobit model. Why Tobit instead of OLS? When it comes to the length of imprisonment, a sentencing judge seems to go through two-stage decisions. The first involves the type of punishment: whether a defendant receives suspended or actual jail

terms. Once a sentencing judge decides on the type of punishment, the judge proceeds to another selection procedure: length of imprisonment. The two-stage decision procedure can be described as $Y_J = \max(0, Y^*_J)$, where Y^*_J is the duration of an actual prison term (measured by months), a continuous variable generated by the classical linear regression model, and 0 involves a suspended prison sentence decision.

$$\textit{Length of Imprisonment} = a + b_1\ \textit{Chaebol} + b_2\ \textit{Controlling Shareholder} + b_3\ \textit{No Compensation} + b_4\ \textit{Amount of Losses} + b_5\ \textit{Quality of Legal Representation} + b_6\ \textit{Instance} + e$$

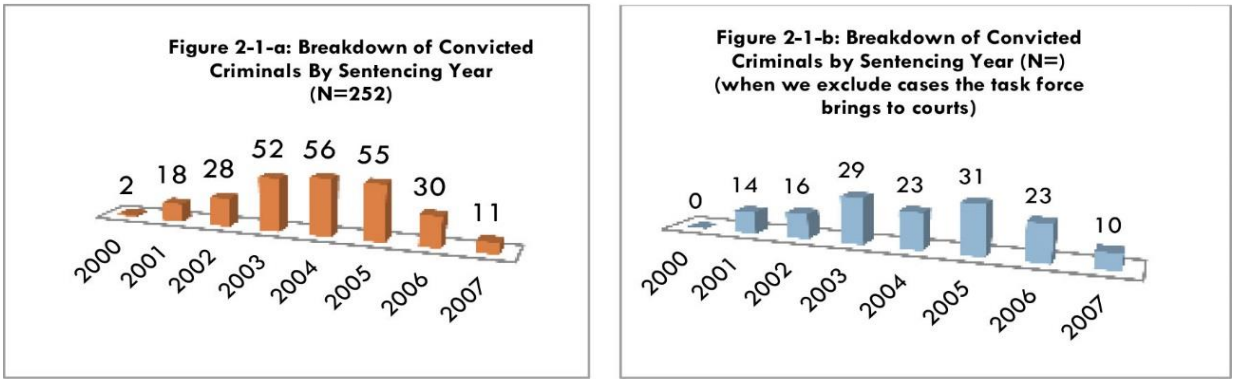
We predict that the probability of suspended imprisonment is negatively associated with a) the size of losses, but positively related to b) reparation for losses and c) quality of legal service. In addition, when considering corporate governance structures of a *chaebol* in which de facto and substantial decision-making power lie in the hands of controlling shareholders, the probability of imprisonment is positively related to d) offender's role as a controlling shareholder. A remaining variable of interest is *chaebol*. The coefficient for *chaebol* throughout the paper is b_1. If a sentencing court is unbiased and fair, b1 should not be different from zero; a *chaebol* itself is a just socio-economic characteristic of criminals rather than an offense or offender-related characteristic. If b_1 is not zero, sentencing bias would appear to exist in the judiciary.

2.5 DESCRIPTIVE STATISTICS OF VARIABLES AND BASIC RESULTS

We have defendant-level data. Our dataset consists of 252 Korean white-collar offenders. Panel B in Table 2-5 reports that 143 defendants were convicted in district courts. Of the 143, 42 defendants were sentenced to actual jail terms, whereas 101 were given suspended jail terms. Then, 39 of 42 defendants subject to prison terms appealed to high courts. Of 101 criminals receiving a suspended jail term in district courts, 57 moved to an appeal court because prosecutors appealed for what they viewed as excessively light sentences. In addition, we have 13 defendants whose cases involve appeal courts only. Therefore, the total number of defendants in high courts amounts to 109 (see Table 2-5– Panel C), which ends up with 252 in total.

As can be seen in Figure Figure 2-1-a, there exist variations over time in the number of adjudicated cases. Between 2003 and 2005, 63% (158 out of the 252) of cases were sentenced. These trends can be partly explained by the task force's active involvement of white-collar crimes. Once we rule out cases the task force brought to court, we observe relatively flat caseload trends shown in Figure 2-1-b.

Figure 2-1 Breakdown of Convicted Criminals by Sentencing Year



Note: "Task force" denotes a special unit that the Korean government launched, mainly aiming at investigating and charging as criminals the *chaebol's* controlling shareholder and CEOs of its subsidiaries who are allegedly liable for the 1997 financial crisis.

Table 2-4 shows that corporate crimes continued even after the 1997 financial crisis. 252 criminals were charged for 906 felonies in total. Among the 906 felonies, 61% happened after 1997.

Table 2-5 shows that *chaebol*-related criminals account for 56% of our sample (140 out of 252). Non-*chaebol* criminals represent 44% (112 out of 252). Controlling shareholders constitute 49% and top management 51 % respectively.

Table 2-4 Descriptive Statistics for White-Collar Crimes by Year

Year	Number	Proportion
before 1993	15	2%
1994	34	4%
1995	54	6%
1996	114	13%
1997	136	15%
1998	118	13%
1999	92	10%
2000	92	10%
2001	57	6%
2002	72	8%
2003	55	6%
2004	43	5%
2005	23	3%
2006	1	0%
Total	906	100%

Table 2-5 White-Collar Criminals by Position and type of Affiliation

Panel.A : White-Collar Criminals by occupational and social position

	Chaebol	Non-*Chaebol*	Total
Controlling shareholder	59	66	125
Top management	81	46	127
Total	140	112	252

Panel.B :White-Collar Criminals by occupational and social position: low court cases (n=143)

	Chaebol	Non-*Chaebol*	Total
Controlling shareholder	32	32	64
Top management	53	26	79
Total	85	58	143

Panel. C : White-Collar Criminals by occupational and social position: high court cases (n=109)

	Chaebol	Non-*Chaebol*	Total
Controlling shareholder	27	34	61
Top management	28	20	48
Total	55	54	109

Note: A controlling shareholder is generally a founder of a firm or his/her family members. Top management refers to a non-family CEO (or high-profile executive) or director. A controlling shareholder may serve as the CEO or director of an affiliate. In this case, he/she is classified as a controlling shareholder.

Table 2-6 suggests that convicted *chaebol*-related offenders are less likely to receive prison sentences than convicted offenders with no ties to *chaebols*; and non-family top management defendants receive lesser punishment than controlling shareholders. Table 2-6 – Panel A shows that a little over a quarter of the convicted defendants (65 out of 252, 25.7%) served prison terms. Of the convicted *chaebol*-related offenders, 20.7% (29 out of 140) were given prison sentences; of their convicted non-*chaebol* counterparts, 32.1% (36 out of 112) received prison sentences. Notable sentencing disparities were found in controlling shareholder-top management pairs. Table 2-6– Panel A reveals that, of convicted non-family high-profile executive defendants, 4.7% (6 out of 127) received actual prison sentences; of convicted controlling shareholder defendants, that number was 47.2% (59 out of 125). More surprising observation is found in Table 2-6– Panel C: no convicted top management was incarcerated

because all top management's prison sentences were later suspended by appeals courts. Table 2-6 - Panel B reports that 143 defendants were convicted in district courts.

Table 2-6 White-Collar Criminals by Affiliation and type of Punishment

Panel. A : White-Collar Criminals by Type of Punishment (N=252)				
	Suspended Jail Terms		Actual Jail Terms	
	Non- *Chaebol*	*Chaebol*	Non- *Chaebol*	*Chaebol*
Top Management	42	79	4	2
Controlling Shareholder	34	32	32	27
Subtotal	76	111	36	29
Total	187		65	
Panel. B : White-Collar Criminals by Type of Punishment: Low Court Cases (n=143)				
	Suspended Jail Terms		Actual Jail Terms	
	Non- *Chaebol*	*Chaebol*	Non- *Chaebol*	*Chaebol*
Top Management	22	51	4	2
Controlling Shareholder	13	15	19	17
Subtotal	35	66	23	19
Total	101		42	
Panel. C : White-Collar Criminals by Type of Punishment: High Court Cases (n=109)				
	Suspended Jail Terms		Actual Jail Terms	
	Non- *Chaebol*	*Chaebol*	Non- *Chaebol*	*Chaebol*
Top Management	20	28	0	0
Controlling Shareholder	21	17	13	10
Subtotal	41	45	13	10
Total	86		23	

Note: A controlling shareholder is generally a founder of a firm or his/her family members. Top management refers to a non-family CEO (or high-profile executive) or director. A controlling shareholder may serve as the CEO or director of an affiliate. In this case, he/she is classified as a controlling shareholder.

A similar pattern could be discerned in pre-trial procedures. Table 2-7 reports that of our sample's white-collar defendants, 44.8% (66 out of 147) were detained during trial procedures. Among them, the percentage of non-*chaebol*-connected detainees nearly doubles that of their *chaebol*-connected counterparts (62.2%, 38 out of 61, versus 32.5% 28 out of 86). As for

controlling shareholders, 72.3% (47out of 65) were detained compared to top management's 23.1 % (19 out of 82).

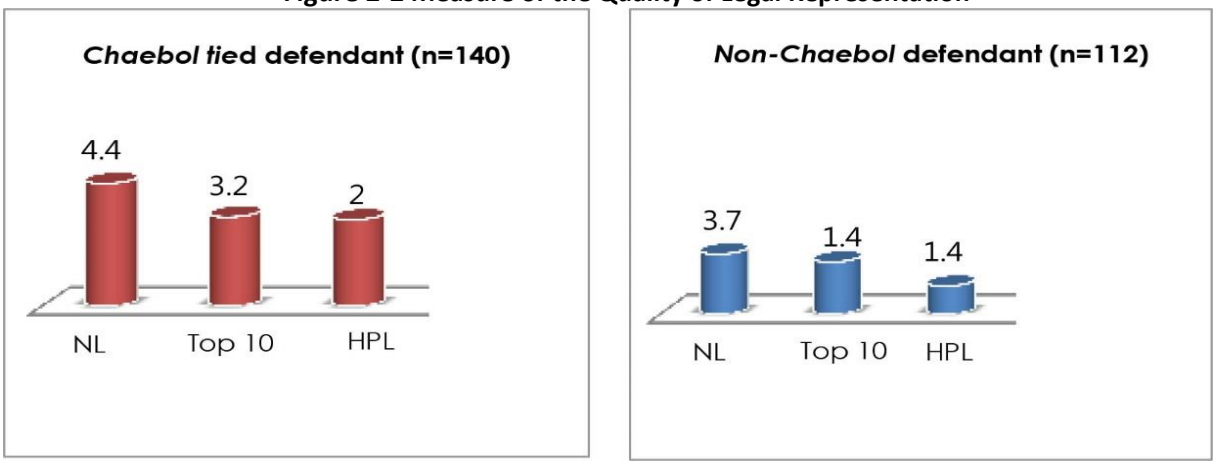
Table 2-7 White-Collar Defendants by Pretrial Custody (n=147)

	No Pretrial Custody		Pretrial Custody	
	Non-*Chaebol*	*Chaebol*	Non-*Chaebol*	*Chaebol*
Top Management	17	46	11	8
Controlling Shareholder	6	12	27	20
Subtotal	23	58	38	28
Total	81		66	

Note: A controlling shareholder is generally a founder of a firm or his/her family members. Top management refers to a non-family CEO (or high-profile executive) or director. A controlling shareholder may serve as the CEO or director of an affiliate. In this case, he/she is classified as a controlling shareholder.

We also observe differences in the quality of legal counsels between *chaebol*-connected defendants and non-*chaebol* ones. As seen in Figure 2, *chaebol*-related defendants received, by every measure, more qualified legal assistance (for all measures except the variable *NL*, the differences are significant at 1 % level and at 10% level for *NL*). Observing this circumstance, some may argue that access to legal resources gives rise to the aforementioned sentencing gaps. At the time of investigation, better-qualified attorneys generally defend the deep-pocketed *chaebol*-connected defendants, who are known to benefit from the early participation of more competent lawyers. If true, the Korea judiciary could escape blame for a *chaebol*-connected defendant winning a lenient sentence. This finding suggests that we need further investigation to confirm whether sentencing gaps do in fact stem from judicial bias rather than the quality of legal representation.

Figure 2-2 Measure of the Quality of Legal Representation



Note: "NL" denotes the average number of defense lawyers assisting each defendant. "EJL" represents the defense lawyers with judge experience. "HPL" refers to the average number of defense lawyers with senior judge experience. "Top10" denotes the average number of defense lawyers from top 10 law firms.

2.6 RESULTS OF QUANTITATIVE ANALYSIS

2.6.1 Baseline Results

The baseline regressions are presented in Table 2-8, Table 2-9, and Table 2-10. We find Korea's judiciary, from pre-trial to trial procedures, to be strongly biased towards *chaebols*. In addition, when control and other independent variables are significant, they have the predicted signs. The variable *No Compensation* is positively related to the probability of convicted corporate criminals being incarcerated. The likelihood that convicted defendants receive suspended jail terms increases by 14% with restitution. The variable Amount of Losses is also positively correlated to the possibility of convicted criminals being imprisoned. The bigger the monetary loss, the more likely convicted offenders are to be incarcerated. As losses rise by every USD 0.1

million, the possibility of imprisonment rises by 4 percentage points and the probable sentence lengthens by 3.8 month.

Table 2-8 Regression Results for the Probability of Imprisonment

Dependent Variable = Imprisonment	(1)	(2)	(3)	(4)
Chaebol	-.89** (.41)	-.74* (.41)	-.82** (.42)	-.88** (.40)
Controlling Shareholder	2.96*** (.50)	3.02*** (.50)	3.13*** (.52)	2.76*** (.48)
No Compensation	1.26** (.59)	1.14* (.60)	1.24** (.61)	1.41** (.60)
Amount of Losses	.37*** (.09)	.40*** (.10)	.38*** (.10)	.35*** (.09)
HPL_Dummy	-.85 (.54)		-1.09* (..62)	
Top10_Dummy		-.73* (.41)	-.65 (.42)	
NL				.07 (.05)
Instance	-4.52*** (.86)	-1.34*** (.40)	-1.42*** (.41)	-1.38*** (.40)
Constant	-4.82*** (.96)	-5.35*** (.91)	-3.5*** (.64)	-5.75*** (.94)
Observations	252	252	252	252

Note: "Imprisonment" indicates a dummy variables taking 1 if a convicted defendant is actually jailed, and 0 if he/she receives a suspended jail term. "*Chaebol*" denotes a dummy variable taking 1 if a firm for whom a convicted defendant works is affiliated with *chaebol*, and 0 otherwise. "Controlling Shareholder" has 1 if a convicted defendant is a founder or a member of a founding family, and 0 if he/she is non-family top management (e.g. CEO or CFO). "Amount of Losses" is equal to ln (Monetary losses which a defendant inflicts on a firm+1). "No Compensation" has 1 if losses from crimes are not fully reimbursed, and 0 otherwise. "Instance" has 1 if a trial court is an appeal court, and 0 if the court is a lower court. "NL" represents the total number of defense lawyers assisting each defendant. "HPL_Dummy" has 1 if one of the defense attorneys is HPL, and 0 otherwise. "HPL" represents defense lawyer with Senior Judge experience. "Senior judge" includes Supreme Court Justice, High (District) Court Chief Judge, High (Disctrict) Court Senior Judge."Top10_Dummy" is 1 if one of the defense attorneys is "Top10" and 0 otherwise. . "Top10" indicates defense lawyer from one of top 10 law firms.

Table 2-9 Regression Results for the Probability of Pretrial Detention

Dependent variable = Pretrial Detention	(1)	(2)	(3)	(4)
Chaebol	-1.35*** (.41)	-1.34*** (.43)	-1.34*** (.43)	-1.33*** (.41)
Controlling Shareholder	1.91*** (.41)	1.91*** (.41)	1.93*** (.42)	1.95*** (.42)
Amount of Losses	.19** (.08)	.19** (.08)	.19** (.08)	.18** (.08)
HPL_Dummy	-.12 (.53)		.02 (.58)	
Top10_Dummy	.	-.02 (.43)	.00 (.44)	
NL				-.02 (.07)
Constant	-1.20* (.72)	-1.30** (.55)	-.98 (.91)	-1.22** (.60)
Observations	148	148	148	148

Note: "*Chaebol"* denotes a dummy variable taking 1 if a firm for whom a convicted defendant works is affiliated with *chaebol*, and 0 otherwise. *"Controlling Shareholder"* has 1 if a convicted defendant is a founder or is a member of founding family, and 0 if he/she is management (e.g. CEO or CFO). *"Amount of Losses"* is equal to ln (Monetary losses which a defendant inflicts on a firm+1*)*.
"NL" represents the defense lawyers of each defendant. *EJL_Dummy"* has 1 if one of the defense attorneys is *EJL*, and 0 otherwise. "EJL" denotes defense lawyer with judge experience. *"HPL_Dummy"* has 1 if one of the defense attorneys is HPL, and 0 otherwise. "HPL" represents defense lawyer with S*enior Judge* experience. *"Senior judge"* includes Supreme Court Justice, High (District) Court Chief Judge, High (Disctrict) Court Senior Judge. *"Top10_Dummy"* has 1 if one of the defense attorneys is "Top10" and 0 otherwise. . "Top10" indicates defense lawyer of a top 10 law firm.

Table 2-10 Regression Results for Length of Imprisonment

Dependent variable = Length of Imprisonment	(1)	(2)	(3)	(4)
Chaebol	-18.6** (-8.5)	-16.2* (-8.5)	-16.9** (-8.4)	-19.8** (-8.2)
Controlling Shareholder	63.6*** (-8.7)	64.0*** (-8.8)	64.4*** (-8.8)	59.4*** (10.3)
No Compensation	32.1** (-16.6)	30.5* (-16.8)	32.4** (-16.5)	32.5** (-14.4)
Amount of Losses	8.5*** (-1.7)	8.8*** (-1.9)	8.5*** (-1.8)	8.6*** (-1.7)
HPL_Dummy	-14.3 (-9.5)		-17.9** (-8.4)	
Top10_Dummy		-10.6 (-8.3)	-9.6 (-8.2)	
NL				1.7 (-1.1)
Instance	-27.9*** (-7.3)	-27.4*** (-7.3)	-27.8*** (-7.2)	-28.6*** (-8.1)
Constant	-107.4*** (-21.3)	-115.7*** (-19.5)	-120.6*** (-29.6)	124.4*** (-20.4)
Observations	252	252	252	252
Sigma	41.3	41.3	40.9	41.3

Note: "*Chaebol"* denotes a dummy variable taking 1 if a firm for whom a convicted defendant works is affiliated with *chaebol,* and 0 otherwise. *"Controlling Shareholder"* has 1 if a convicted defendant is a founder or is a member of founding family, and 0 if he/she is management (e.g. CEO or CFO). *"Amount of Losses"* is equal to ln (Monetary losses which a defendant inflicts on a firm+1*). "No Compensation"* has 1 if losses from crimes are not covered, and 0 otherwise. *"Instance"* has 1 if a trial court is appeal court, and 0 if the court is a lower court. *"NL"* represents the defense lawyers of each defendant. *EJL_Dummy"* has 1 if one of the defense attorneys is *EJL*, and 0 otherwise. "EJL" denotes defense lawyer with judge experience. *"HPL_Dummy"* has 1 if one of the defense attorneys is HPL, and 0 otherwise. "HPL" represents defense lawyer with S*enior Judge* experience. *"Senior judge"* includes Supreme Court Justice, High (District) Court Chief Judge, High (Disctrict) Court Senior Judge. *"Top10_Dummy"* has 1 if one of the defense attorneys is "Top10" and 0 otherwise. . "Top10" indicates defense lawyer of a top 10 law firm.

2.6.2 Robustness Check

Table 2-11, Table 2-12, and Table 2-13 perform robustness check. Our robustness checks add several variables to the baseline regressions such as Regional and New Chief Justice dummy. Sentencing patters for corporate offenders may vary along lines of regional jurisdiction. To control this, we use a Regional dummy variable, which corresponds to 1 if the region includes Seoul or to 0 otherwise. A 'New Chief Justice' variable controls the situation where a new chief justice, Yong-hoon Lee (2005 to 2011), hardened the court's stance on high-profile white-collar criminals. Since all judges are subject to a hierarchy of judicial structures, a new chief justice may affect the sentencing behavior of judges. As shown in and Table

Table 2-11 to Table 2-13, however, these two dummy variables changed nothing in the results of the baseline regressions.

Table 2-11 Regression Results for the Probability of Imprisonment

Dependent Variable = Imprisonment	(1)	(2)	(3)	(4)
Chaebol	-.86** (.41)	-.71* (.42)	-.80* (.43)	-.86** (.41)
Controlling Shareholder	2.85*** (.49)	2.98*** (.51)	3.10*** (.53)	2.64*** (.48)
No Compensation	2.03** (.83)	1.95** (.85)	2.12** (.88)	2.11*** (.82)
Amount of Losses	.37*** (.09)	.41*** (.10)	.39*** (.10)	.36*** (.09)
HPL_Dummy	-.81 (.55)		-1.05* (.63)	
Top10_Dummy		-.89** (.43)	-.83* (.44)	
NL				.07 (.05)
Instance	-1.44*** (.41)	-1.46*** (.41)	-1.51*** (.42)	-1.42*** (.41)
Constant	-5.18*** (1.34)	-6.19*** (1.32)	-7.06*** (1.74)	-5.91*** (1.29)
Region	Y	Y	Y	Y
New Chief Justice	Y	Y	Y	Y
Observations	252	252	252	252

Note: "*Chaebol"* denotes a dummy variable taking 1 if a firm for whom a convicted defendant works is affiliated with *chaebol*, and 0 otherwise. *"Controlling Shareholder"* has 1 if a convicted defendant is a founder or is a member of founding family, and 0 if he/she is management (e.g. CEO or CFO). *"Amount of Losses"* is equal to ln (Monetary losses which a defendant inflicts on a firm+1*). "NL"* represents the defense lawyers of each defendant. *EJL_Dummy"* has 1 if one of the defense attorneys is *EJL*, and 0 otherwise. "EJL" denotes defense lawyer with judge experience. *"HPL_Dummy"* has 1 if one of the defense attorneys is HPL, and 0 otherwise. "HPL" represents defense lawyer with S*enior Judge* experience. *"Senior judge"* includes Supreme Court Justice, High (District) Court Chief Judge, High (Disctrict) Court Senior Judge. *"Top10_Dummy"* has 1 if one of the defense attorneys is "Top10" and 0 otherwise. . "Top10" indicates defense lawyer of a top 10 law firm. *"New Chief Justice"* denotes a dummy variable indicating that 1 if a case was sentenced after 2005, and 0 otherwise. "Region" denotes a dummy variable indicating that 1 if regional jurisdiction is Seoul, and 0 otherwise

Table 2-12 Regression Results for the Probability of Pretrial Detention

Dependent variable = Pretrial Detention	(1)	(2)	(3)	(4)
Chaebol	-1.24*** (.43)	-1.28** (.45)	-1.29*** (.45)	-1.23*** (.43)
Controlling Shareholder	1.96*** (.42)	1.92*** (.43)	1.94*** (.43)	1.98*** (.44)
Amount of Losses	.19*** (.08)	.19*** (.08)	.19** (.08)	.18*** (.08)
HPL_Dummy	-.11 (.55)		.00 (.67)	
Top10_Dummy	.	-.11 (.45)	.16 (.47)	
NL				-.02 (.07)
Constant	-.07 (1.47)	-.13 (1.39)	-.26 (1.59)	-.14 (1.36)
Region	Y	Y	Y	Y
New Chief Justice	Y	Y	Y	Y
Observations	148	148	148	148

Note: "*Chaebol"* denotes a dummy variable taking 1 if a firm for whom a convicted defendant works is affiliated with *chaebol*, and 0 otherwise. *"Controlling Shareholder"* has 1 if a convicted defendant is a founder or is a member of founding family, and 0 if he/she is management (e.g. CEO or CFO). *"Amount of Losses"* is equal to ln (Monetary losses which a defendant inflicts on a firm+1*). "NL"* represents the defense lawyers of each defendant. *EJL_Dummy"* has 1 if one of the defense attorneys is *EJL*, and 0 otherwise. "EJL" denotes defense lawyer with judge experience. *"HPL_Dummy"* has 1 if one of the defense attorneys is HPL, and 0 otherwise. "HPL" represents defense lawyer with S*enior Judge* experience. *"Senior judge"* includes Supreme Court Justice, High (District) Court Chief Judge, High (Disctrict) Court Senior Judge. *"Top10_Dummy"* has 1 if one of the defense attorneys is "Top10" and 0 otherwise. . "Top10" indicates defense lawyer of a top 10 law firm. *"New Chief Justice"* denotes a dummy variable indicating that 1 if a case was sentenced after 2005, and 0 otherwise. "Region" denotes a dummy variable indicating that 1 if regional jurisdiction is Seoul, and 0 otherwise

Table 2-13 Regression Results for the Length of Imprisonment

Dependent variable = Length of Imprisonment	(1)	(2)	(3)	(4)
Chaebol	-19.2** (8.2)	-16.8** (8.3)	-17.4** (8.2)	-20.2** (8.2)
Controlling Shareholder	62.7*** (10.4)	63.9*** (10.5)	64.2*** (10.5)	58.7*** (10.3)
No Compensation	42.5*** (16.2)	41.7*** (16.3)	43.1*** (16.4)	43.1*** (16.0)
Amount of Losses	8.0*** (1.7)	8.4*** (1.7)	8.0*** (1.7)	8.2*** (1.7)
HPL_Dummy	-13.1 (10.0)		-16.5 (11.2)	
Top10_Dummy		-13.2 (8.4)	-12.5 (8.4)	
NL				1.6 (1.1)
Instance	-28.6*** (8.1)	-28.6*** (8.1)	-28.9*** (8.0)	-29.2*** (8.1)
Constant	-111.0*** (26.4)	-125.1*** (26.1)	-133.0*** (31.4)	123.8*** (25.9)
Region	Y	Y	Y	Y
New Chief Justice	Y	Y	Y	Y
Observations	252	252	252	252
Sigma	40.9	40.8	40.9	41.3

Note: "*Chaebol"* denotes a dummy variable taking 1 if a firm for whom a convicted defendant works is affiliated with *chaebol*, and 0 otherwise. *"Controlling Shareholder"* has 1 if a convicted defendant is a founder or is a member of founding family, and 0 if he/she is management (e.g. CEO or CFO). *"Amount of Losses"* is equal to ln (Monetary losses which a defendant inflicts on a firm+1*). "NL"* represents the defense lawyers of each defendant.
EJL_Dummy" has 1 if one of the defense attorneys is *EJL*, and 0 otherwise. "EJL" denotes defense lawyer with judge experience.*"HPL_Dummy"* has 1 if one of the defense attorneys is HPL, and 0 otherwise. "HPL" represents defense lawyer with S*enior Judge* experience. *"Senior judge"* includes Supreme Court Justice, High (District) Court Chief Judge, High (Disctrict) Court Senior Judge.*"Top10_Dummy"* has 1 if one of the defense attorneys is "Top10" and 0 otherwise. . "Top10" indicates defense lawyer of a top 10 law firm. *"New Chief Justice"* denotes a dummy variable indicating that 1 if a case was sentenced after 2005, and 0 otherwise. "Region" denotes a dummy variable indicating that 1 if regional jurisdiction is Seoul, and 0 otherwise

One may challenge our findings by claiming that leniency towards chaebol-connected offenders could be attributed to prosecutorial selection bias rather than sentencing bias. This may appear plausible because, in all our cases, public prosecutors choose to bring formal charges to trial. Systematic patterns in the prosecution of chaebol-connected criminals, should they be found, may yield a selection bias and affect our regressions analysis.

Two scenarios are possible. First, a public prosecutor may be more willing to bring chaebol-connected cases to court in order to burnish his/her corruption-fighting reputation. This can lead the prosecutor to bring cases to court even if he/she may lose a case with low quality of evidence or even if he/she charges corrupt barons with minor counts. In the presence of such overzealous prosecution, the sentences to prosecuted *chaebol*–related defendants are likely to be more lenient than those of non-*chaebol* ones.

The other possibility is that a public prosecutor can be reluctant to bring *chaebol*-connected cases at trial. On one hand, *chaebol*–related defendants are armed with better legal profession as shown in Figure 2. Thus, prosecutors are less likely to win the cases. Trial outcomes are critical for prosecutors to be elevated to higher positions. Losing prosecutors are unlikely to be rewarded with promotions. On the other hand, prosecutors might be reluctant out of political considerations. Confronted by the colossal power of *chaebols,* prosecutors may hesitate to investigate them or prosecute only the most egregious *chaebol*-connected cases. Hence, those that are actually prosecuted are generally serious crimes that will receive harsh punishments.

We argue that the second scenario, for several reasons, makes more sense in the context of Korea. In the U.S. the vast majority of prosecutors are elected officials; in Korea, all prosecutors are appointed. Since a prosecutor's record is critical to promotion, a prosecutor cares intensely about winning prospects, not reputation. In addition, accused tycoons generally establish close connections with high-profile politicians, including the country's president (example, politically connected firms). Since a prosecutor is appointed by the attorney general who in turn is a political appointee of the president, prosecutors are vulnerable to indirect political pressure. Consequently, we can infer that *chaebol*-related cases that do come to trial are

extraordinarily serious. This suggests that the selection bias that may exist in our dataset does not undermine the presence of sentencing bias toward a conglomerate, but strengthens it; since prosecutorial selection bias tilts the severity of offenses upward, this helps strengthen our claim for sentencing bias in favor of *chaebols*. In this respect, it is sensible to interpret that the estimates presented here as lower bounds on *chaebol* bias.

2.7 THE SOURCES OF TOO BIG TO JAIL

2.7.1 Results of Analysis of Mitigating Circumstances

In this section, we conduct an in-depth analysis of sentencing opinions, particularly focusing on mitigating circumstances. The analysis of mitigating factors vividly describes judicial perceptions of corporate crimes that are unlikely to be captured through mere regressions analysis. This analysis strengthens the findings in the previous sections.

Table 2-14 shows that the most widely accepted defense, found in 146 out of 232 cases, is voluntary compensation for losses made to victims. The next most frequently accepted claim is the "no-private-gain" defense, claiming that a defendant acquired no private gain from wrongdoings because crimes generally involved in-group transactions that were consistent with the interests of a whole business group (e.g., to prop up troubled affiliates in the group). This claim, found in 135 out of 232 cases, mostly involved outlawed in-group transactions. The third is that a defendant has no criminal record; the fourth is "acceptance-of-responsibility" defense,

where defendants clearly demonstrate acceptance of responsibility for their crimes. We present in detailed descriptions and examples of each defense.

Table 2-14 The Descriptive Statics for the Defense Accepted by Judge

	Chabol (n=132)	Non-*chaebol* (n=100)	P-Value
'Voluntary-compensation-for-losses' defense	0.58 (76)	0.69 (69)*	0.096
'No-private-gain' defense	0.71 (94)***	0.41 (41)	2.52E-06
'No-criminal-history' defense	0.43 (57)	0.57 (57)**	0.03
'Acceptance-of-responsibility' defense	0.47 (63)	0.45 (45)	0.68
'Top-management' defense	0.35 (47)	0.30 (30)	0.371

Note 1: P-value shows the outcome of two-sample mean-comparison test.
Note 2: 'Voluntary-compensation-for-losses' defense denotes the voluntary compensation for losses to victims by convicted criminals. ''No-private-gain" defense indicates that a criminal acquired no private gain from crimes because crimes were generally in-group transactions committing for facilitating the interests of a whole business group (e.g., for propping troubled affiliates in the group). 'No-criminal-history' defense denotes a case in which white-collar offenders have a clean record. 'Acceptance-of-responsibility' defense indicates that convicted defendants clearly demonstrate acceptance of responsibility for their crimes. 'Top-management' defense represents that the convicted non-family top managers apologize for their involvement in crimes by claiming that they just followed past common management practices as employees.

The detailed examination of mitigating factors reaffirms the existence of a *chaebol* bias and in several dimensions, supplements the bias. First, the analysis shows that voluntary payment of restitution leads judges to lower criminals' reprehensibility, translating into more leniency for *chaebols*-linked defendants with vast financial resources. Second, considerations of one's criminal record and defendant's philanthropic activities (or contributions to the economy) also reflect judicial bias for *chaebols* because these defenses appear to be more relevant for *chaebol*-connected defendants. In the subsequent subsection, we attempt to answer one of the key questions in this paper: what motivates the judiciary to deal in too-big-to-jail sentences?

Table 2-15 Description and Example for Mitigating Factors

No. of observation	Factors	Description	Examples	Critique from media or academia
146	'Voluntary-compensation-for-losses' defense	When imposing a sentence, one of the most decisive mitigating circumstances a judge considers is the voluntary compensation for losses to victims by criminals.4 Several patterns are worth notable in the defense. First, losses (or gains) from crimes are ill-defined. Courts define the gains so narrowly that private benefits of control were excluded. Second, the way a court deems restitution is, to some extent, arbitrary. For example, when damages are paid by one of several co-defendants, courts apply that restitution for other defendants who did not compensate victims. In addition, the judiciary considered compensation as one of mitigating factors if restitution was made prior to adjudication, which suggests that defendants do not necessarily make pre-indictment restitution		Critics argue that this judicial behavior weakens the deterrent effect of criminal sanctions because it may facilitate the following opportunistic behavior: If a crime goes undetected, white-collar offenders retain their stolen assets; if detected, they make restitution, which buys them a suspended sentence.

[44] Note that the compensation we refer to here differs from restitution American judges employ as criminal sanctions. In the Korean criminal justice system, judges, when imposing punishment, are allowed to select only two types of criminal penalty: fine and imprisonment (with penal labor). Thus Korean judges cannot order defendants to make restitution or give suspended imprisonment on the condition of restitution. Exactly speaking, in addition to the two sanctions, a judge can choose imprisonment without penal labor. However, imprisonment without penal labor is seldom used.

135	'No-private-gain' defense	This is one of the most common claims made particularly when crimes involve two circumstances. When crimes took the form of in-group self-dealing transactions to prop up a troubled subsidiary, courts generally hold that a defendant committed the crimes for the good of the company. Along the same lines, if founding family members commit crimes to retain control over a business group, judges generally rule that the crimes did not serve private interests.	In a Daewoo group case, for example, a firm was financed through accounting fraud and a loan obtained through the fraud was transferred to help a troubled subsidiary. The courts held that these crimes were not committed for private gain of defendants. Another example concerns a Samsung group case where defendants issued equity at unfairly low prices to cede control over Samsung Group to a controlling shareholder's son. A judge held that the defendants, board directors who approved the equity issue, never intended to gain privately from their criminal conduct.	As Dick and Zingales (2004) show, private benefits of control constitute quantifiable economic value in many cases, accounting for, on average, 14 percent firms' equity value. This suggests that the private benefits of control are obviously a part of economic gains which can be critical motives for economic crimes.
114	'No-criminal-history' defense	The fact that white-collar offenders have a clean record serves as an extenuating factor in sentencing. By portraying themselves as law-abiding citizens, white-collar offenders claim to have made a mistake rather than commit crimes on purpose. Their claim is that they are in essence different from traditional street criminals.		

108	'Acceptance-of-responsibility' defense	As in the United States Sentencing Guideline5, if a convicted defendant clearly demonstrates acceptance of responsibility for his crimes, this also serves as an attenuating factor, allowing judges to give more leniency.		There exist little criteria (even any descriptions of mitigating circumstances) for determining whether a defendant in question deserves the reduction of illegality under this defense, which suggests that this defense totally is under a regimen of unbounded judicial discretion. 6
77	'Top-management' defense	Hired top management in a business group plays a subordinate role in committing crimes. On trial, top management tends to invoke the defense that it just followed past common management practices as an employee. Many cases included in our sample occurred before the 1997's financial crisis, at a time when few checks and balances might constrain a dominant shareholder. Many firms were plagued by outdated management practices, such as window dressing or off-the-book accounts; given such circumstances, a court would tend to adjust downward illegality of a hired CEO.	The CEO of Doosan Construction Company supplied $12 million off-the-book funds for a controlling shareholder. The CEO invoked the top management defense. The court ruled that even though he failed to defy an untoward order from a controlling shareholder, the fact that he was swayed by a dominant shareholder justified a suspended prison term.	

5 http://www.ussc.gov/Guidelines/2012_Guidelines/Manual_HTML/3e1_1.htm

6 In the U.S., the Guideline recounts specific cases where a defendant qualifies under subsection (a), such as (A) truthfully admitting the conduct comprising the offense(s) of conviction, and truthfully admitting or not falsely denying any additional relevant conduct for which the defendant is accountable under §1B1.3 (Relevant Conduct), (c) voluntary payment of restitution prior to adjudication of guilt; and (d) voluntary resignation from the office or position held during the commission of the offense;

2.7.2 Testing the Size Hypothesis

We investigate the source of *chaebol* bias by empirically testing two hypotheses. Our natural starting point for formulating the first testable hypothesis is to focus on the size of business groups. The hypothesis is: "the larger the business group, the more lenient its judicial treatment (we call it the size hypothesis)."

The size hypothesis suggests that lighter criminal penalties might be intrinsic to the size of *chaebols* as in too-big-to-fail situations (Mishkin 2006). Recent leniency given to Wall-street executive is likely to be explained by this size hypothesis. This is easily confirmed by what the U.S. Attorney general Eric Holder told the Senate Judiciary Committee.

"I am concerned that the size of some of these institutions becomes so large that it does become difficult to prosecute them, […] When we are hit with indications that if you do prosecute, if you do bring a criminal charge it will have a negative impact on the national economy, perhaps world economy, that is a function of the fact that some of these institutions have become too large."

This size hypothesis is highly relevant in the Korean context for several aspects. First, the largest *chaebols* make substantial contributions to the national economy. For example, the total sales of the top 4 family business groups (Samsung, Hyundai motor car, LG, and SK) contributed to 49.2 percent of GDP and the total assets of their affiliates amounted to 43.5 percent of GDP in 2005 (Solidarity for Economic Reform 2009). Since *chaebols* are mainly managed by a few controlling shareholders, judges worry about the economy-wide consequences of a harsh sentence against these tycoons.

These concerns lead the judiciary to engage in too-big-to-jail, suggesting a reason for Korea's prevalence of suspended sentences (or shorter prison terms) for them.

Note that many cases involving in-group transactions in our sample take the form of outlawed self-dealing in which a subsidiary bails out its parent in danger of bankruptcy. Column (2) in Table 2-16 confirms this hypothesis: the *chaebol* bias is stronger for the top 10 business groups than for those outside that ranking.

In addition, a "national champion" ideology is also likely to present a rationale for the size hypothesis. Many Koreans support the notion that what is good for, say, Samsung is also good for Korea. They are proud of Samsung, Hyundai, and LG because they compete and shine in the world market. Thus they tend to defend *chaebols* regardless of their transgressions. For that reason, the judiciary cowers at the prospect of being adversarial.

2.7.3 Testing the Civil Law Hypothesis

The civil law hypothesis is motivated by several well-known studies that civil-law courts allow more substantial expropriation of minority shareholders than their common-law jurisdictions counterparts. We believe that this argument is pertinent to our exploration of the source of the *chaebol* effect for at least two reasons.

First, consistent with law and finance literature, Table 18 shows that outlawed in-group transactions are overwhelmingly committed by *chaebol*-related defendants. For embezzlement and "narrow self-dealing", there exist no significant differences between *chaebol* versus non-*chaebol* offenders.

Second, Table 2-14 reports that for *chaebol*-related cases, the no-private-gain defense was the most commonly accepted claim, made in 94 out of 132. In addition, this defense is the only claim which is accepted more for *chaebol*-related cases than for non-*chaebol* cases at 1% significant level. This pattern is not found in other claims such as the voluntary-compensation-for-losses defense and the no criminal records defense.

Table 2-16 Sources of the *Chaebol* effect

	Imprisonment			
	(1)	(2)	(3)	(4)
Chaebol	-.89** (.41)		-.75* (.42)	
Top 1_10_chaebol		-1.03** (.51)		-.86* (.52)
Less Top_10_chaebol		-.80* (.47)		-.68 (.47)
Ingroup Transaction			-.88** (.42)	-.86** (.43)
Observations	252	252	252	252

Note 1: Covariates include the variable Controlling Shareholder, Loss, Instance, No Compensation, and Amount of Losses. All results from probit. Robust standard errors are in parentheses. ***, ** and * indicate coefficients significantly different from 0 at the 1%, 5% and 10% levels, respectively.
Note 2. "Top 1_10_chaebol" denotes a dummy variable indicating that 1 if a firm for whom a convicted defendant works is affiliated with top 1 to 10 chaebol and 0 otherwise. "Less Top_10_chaebol" denotes a dummy variable indicating that 1 if a firm for whom a convicted defendant works is affiliated with below top 10 chaebol 1 and 0 otherwise. "Ingroup Transaction" denotes a dummy variable indicating that 1 if "No-private-gain" defense is accepted, and 0 otherwise. 'No-private-gain" defense indicates that a criminal acquired no private gain from crimes because crimes were generally in-group transactions committing for facilitating the interests of a whole business group (e.g., for propping up troubled affiliates in the group).

Specifically, we test the civil law hypothesis using an In-group Transaction dummy, indicating that 1 if the no-private-gain defense is accepted, and 0 otherwise.

Column (3) in Table 2-16 shows the results that the In-group Transaction dummy lowered the likelihood of incarceration by 9.8 percentage points. Column (4) in Table 2-16shows that the

inclusion of In-group Transaction dummy weakens the *chaebol* effect, 10.2 to 8.4 percentage points. This pattern is especially notable for mid-level *chaebols*. For top 10 *chaebols*, the inclusion of the In-group Transaction dummy attenuates the *chaebol* effect from 11.2 to 9.2 percentage points. For *chaebols* outside the top 10, this dummy removes the correlation between *chaebols* and leniency.

How should we interpret this result? We interpret this finding as evidence that the Korean judiciary reviews related-party transactions based on the interests of the business group rather than those of (minority) shareholders of each affiliate. Specifically, criminals attempted to justify related-party transactions in the name of a plausible business purpose, especially group management, i.e., management of constituent companies in accordance with the overall interest of the group. Given such circumstance, a court would tend to adjust downward the blameworthiness of convicted criminals by deeming this circumstance as a mitigating factor. Such a tendency by the court suggests that leniency is just a reflection of the judicial considerations into weighing the group's interests.

This interpretation is line with the claim that civil law is less suspicious of conflicted transactions than common law, and subjects them to more lenient regulatory and legal scrutiny (Johnson et al. 2000).

2.8 CONCLUSION

A central issue in social sciences has long been the interaction between legal and economic systems. The nexus between the two critical systems has been clarified by prominent scholars. In particular, finance and economics literature tends to focus on how legal systems affect economic outcomes. However, little of the literature has investigated how a specific form of economic organization influences and interacts with judicial behavior and as a result, how the judiciary helps sustain the organization, especially in Korea where large family business groups dominate a national economy.

We have explored these issues with a focus on how the judiciary addresses corporate fraud offenders involved with Korea's large business groups. Using a unique data set about Korean corporate crimes, we have attempted to identify and quantify too big to jail phenomena in the judiciary. We find that courts are excessively leniently in dealing with tycoons; large family business groups and those who run them are often too big to jail. These findings are robust across different measures of the quality of legal representation and the use of additional covariates. In addition, we show that observed leniency can be explained by concerns for system risks caused by harsh sentences against *chaebols* and judicial unwillingness to regulate in-group transactions.

Our study leaves one interesting topic for future research. Many studies show that family control is common around the world. To more examine too big to jail, further cross-country work is required to conduct.

Existing studies about too-big-to fail investigate the moral hazard problem (Stern and Feldman 2004; Mishkin 2006): whether and how expectations of too-big-to-fail distort the

behavior of market participants. This question can be readily applied to too-big-to-jail, which creates a moral hazard problem for would-be white-collar criminals that parallels the too-big-to-fail problem for big banks. Since the larger the firm, the more the likelihood of leniency, a controlling shareholder has strong incentives for size-maximization rather than profit-maximization. That is, as a consequence of too big to jail, firms are expanding their size for reasons other than the realization of economies of scale. This argument is also worthwhile empirically testing. This alternative way of understanding the channel through which legal determinants interact with corporate governance offers a new point of departure for more rigorous theoretical models.

Lastly, this research offers a critical implication to policy makers. Our findings and several anecdotal evidence show that large (financial) firms benefit from implicit government guarantee (too big to fail) and from the fact that they become the untouchables (too big to jail) due to their magnitude. If both regulatory authorities and the judiciary fail to manage too-big-to-fail (jail) problem ex-post, we need ex-ante measures to address these concerns: cap on the size of financial institutions or restriction of some type of risky behavior, so-called "Volcker rule." For policy makers, this finding implies that we need to cap the magnitude of financial intermediaries or ban specific type of risky behavior. Our finding adds to supporting arguments for the Volcker rule.

3.0 REVOLVING DOOR ATTORNEYS AND THE POWER OF CONNECTIONS: EVIDENCE FROM KOREA

3.1 INTRODUCTION

Connections matter. From individuals[7] to firms,[8] all economic agents spend large amounts of time and money establishing and sustaining their personal and professional connections. This is due to widespread belief that, for any economic entity, connectedness is a key determinant of success. There is ample empirical evidence of causal linkage between individual ties and socioeconomic outcomes in the private sector (Kranton and Minehart 2001; Rauch and Trindade 2002; Munshi 2003; Burchardi and Hassan 2011).

This study focuses on the public sector for which there is limited empirical evidence as to whether connections affect decision making. In this paper, we examine whether connections affect behavior of the judiciary, focusing on revolving door phenomena in Korea's judiciary. Using a unique data set of 270 Korean high-profile white-collar criminals, we investigate whether judges favor newly retired senior judge and public prosecutor attorneys [9] (*Revolving door attorneys*) by handing down light criminal sanctions to clients of *Revolving door attorneys*.

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[7] *Facebook* has1.11 billion people using the site each month (as of March 2013). For details, see an AP news article http://news.yahoo.com/number-active-users-facebook-over-230449748.html. *Linkedin* counts over 200 million members (as of 2012). For more information see http://blog.linkedin.com/2013/01/09/linkedin-200-million.

8 To build political connections through which firms influence policy, firms not only make high campaign contributions but also have massive lobbying expenditures. The size of federal lobbying industry is known to be more than 4 billion dollars (Bertrand, Bombardini, and Trebbi 2012).

[9] *Revolving door attorneys* in this paper refer to defense attorneys with senior judge and public prosecutor experience. "Senior judge" includes Supreme Court Justice, high (district) court chief judge, high (district) court senior judge. "Senior public prosecutor" includes the prosecutor general, a chief of high (district) public prosecutor's

The public tends to believe that connections *Revolving door attorneys* acquired during public service are key determinants of lenient criminal sanctions. Koreans sarcastically call this form of favoritism *jungwanyeoo* ***(前官禮遇),*** "showing respect to seniors," or giving seniors "petty gifts," a pervasive perception that discredits the judiciary as a whole. [10]

Since the suspension of a sentence in Korea is tantamount to acquittal,[11] accused barons are eager to hire well-connected counsels to buy their way out of prison sentences, ensuring *Revolving door attorneys* highly lucrative post-retirement salaries. In this regard, *jungwanyeoo* can be understood as a special case of the "revolving door" problem, the movement of public officials into the industry they formerly regulated. That is why former senior judge attorneys reaping benefits from such connections are termed *"Revolving door attorneys."* [12]

There are at least two reasons why *Revolving door attorneys* are ideal for studying how connections sway the behavior of public officials. The first obvious benefit is ease with which

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office, and high (district) court senior prosecutor. For brevity, whenever we refer to *Revolving door attorneys,* lawyers with senior judge careers through this paper, senior judges indicate senior judge and public prosecutor.

[10] One poll showed that 83.4 % of respondents agreed that *jungwanyeoo* is prevalent in criminal cases and 83.7% of respondents agreed that *jungwanyeoo* is a manifestation of unequal treatment before the law (source: poll by the Supreme Court in 2003, for more information see a news article. http://www.lawtimes.co.kr/LawNews/News/NewsContents.aspx?serial=12445&kind=ISU).

[11] First, the Korean criminal justice system has few public officers to supervise all those who receive suspended sentences. Accordingly, it is highly unlikely that suspended sentences will be resumed if one violates its terms. Second, as long as they receive suspended sentences, convicted white collar offenders face few hurdles to returning to management. Take, for instance, Lee Gun-hee, the chairman of Samsung Group, Korea's largest *chaebol*. In April 2008, Mr. Lee resigned his position after being accused of tax evasion and breach of fiduciary duty. The judiciary, in August 2009, gave him a three-year suspended jail sentence. By Christmas of that year, President Lee Myung-bak pardoned him, opening the way for his return to his former post in March 2010. This tycoon, convicted of multiple felonies, was able to return to power in less than two years without a single day of confinement.

[12] There is substantial survey evidence that the public well recognizes the power of influence peddling of *Revolving door attorneys*: one poll has shown that while 53% of respondents would want to hire Revolving door attorneys, 40% would want to hire talented attorneys. The poll also showed that people want *Revolving door attorneys* because they believe that 1) *Revolving door attorneys* help enhance a defendant's winning probability (47% of respondents), 2) *Revolving door attorneys* have mediating ties between defendants and judges or prosecutors (31%), and 3) *Revolving door attorneys* help their defendants avoid worst-case scenarios (20%). Only 5% want *Revolving door attorneys* because they believed they were talented attorneys (source: poll by Department of Justice in 2011). For more information, see the news article (http://news.donga.com/3/all/20120704/47509937).

we can identify the judicial connections examined here, thanks to the simplicity of the institutional framework.

For several reasons, the studies of the impact of political connections on legislation (e.g., lobbying) confront several challenges: (1) the unit of analysis is at issue. Since one bill may contain many provisions, focusing on the bill results in mis-measurement of the impact of lobbying (Kang 2012); (2) another challenge is to identify relevant actors connected with lobbyists in legislative procedures because legislation often involves multiple groups such as legislators, their staffs, or even high-profile public officials in the executive; (3) even if we identify specific policy makers related to lobbyists, problems may still remain because the impact of a few politicians in the legislature is likely to be limited, which leads to the imprecise estimation of the power of political connections (Acemoglu et al. 2010) .

For *Revolving door attorneys*, judicial ties are easy to observe because it is not hard to check when they started and terminated their careers in the judiciary. In addition, the unit of our analysis is self-evident. Observing several pieces of anecdotal evidence, we can measure to the extent such connections affect sentences, focusing on whether *Revolving door attorney*-represented convicted defendants are given leniency (e.g., the higher probability of suspending jail terms or shorter imprisonment length). Another advantage lies in the potential applicability of the results to more general institutional settings. Studies show that the incentive structures of judges in Korea, one of civil law jurisdictions bears a striking resemblance to those of civil servants (Levy 2005; Rasmusen and Ramseyer 1997, 2001; Garopa and Ginsburgh 2011). Therefore, the analysis and results of *Revolving door attorneys* can be readily applied to civil servants in the public sector.

In attempting to empirically examine whether the judiciary favors professionally connected lawyers, the key empirical challenge is an identification issue. The mere fact that *Revolving door attorneys* raise the likelihood of leniency for convicted defendants does not count as unquestionable evidence of favoritism. It could be due to their skills (or effort). To distinguish connections from skills, we attempt to identify a time period when the power of ties plunges. We hypothesize that preferential treatment granted to *Revolving door attorneys* substantially declines after the first year of their exit from the judiciary. To check this hypothesis we adopt the following identification strategy: to use the length of retirement of former senior judge lawyers as a source of exogenous variation in sentencing outcomes across convicted defendants. Specifically, we group *Revolving door attorneys* along their length of retirement. This strategy appears reasonable because the length of their retirement is related to judicial connections, but orthogonal to unobservable features of defense counsels, such as their intrinsic talent or professional knowledge. This strategy helps us to isolate *Revolving door attorneys'* connections from their other characteristics such as expertise, experience, and innate cognitive capability.

Another identification strategy is to exploit knowledge of the mechanisms in which favoritism is more likely. The basic theory of corruption claims that corruption, or more broadly unethical behavior is sensitive to media scrutiny (Mark and Levitt 2002, Brunetti and Weder 2003, Chowdhury 2004).[13] This idea offers another chance to exploit variation across convicted

[13] Brunetti and Weder (2003) show a strong association between the level of press freedom and the level of corruption across countries, which suggests that an independent press serves as an important check against corruption. Mark and Levitt (2002) investigate corruption among Japan's elite sumo wrestlers. They find that match rigging is pervasive in the final days of sumo tournaments but that match rigging disappears during times of increased media scrutiny.

criminals within one *attorney***.** If leniency is a result of favoritism, the impact of *Revolving door attorneys* on the probability of leniency is expected to decrease as media coverage increases.

Our paper finds that judicial connections have sizable impacts on sentences. Convicted white-collar offenders who are represented by *Revolving door attorneys* are more likely to receive suspended jail terms relative to those represented by ordinary attorneys by about 15 percentage points. In addition, among the guilty corporate offenders who are actually incarcerated, those defended by *Revolving door attorneys* serve shorter jail terms by 24 months relative to those represented by non-connected ordinary lawyers.

We also find evidence on a time-variant feature of the connections: *Revolving door attorneys'* power to exact lighter sentences remarkably drops off approximately the first year following their exit from the judiciary; control groups (ex-senior judge lawyers who represent cases more than one year after retirement) do not increase the likelihood of leniency for their clients.

There is no plausible evidence to suggest that *Revolving door attorneys* are more competent than these control groups. Indeed, the groups share with *Revolving door attorneys* a considerable similarity in their career paths. They are equally capable lawyers with similar judicial careers but "weakly-connected" compared to *Revolving door attorneys.* Therefore, this suggests that the observed variance in the likelihood of lenient sanctions between the control groups and *Revolving door attorneys* is unlikely to reflect differences in expert skill or knowledge in criminal trial procedures. A reasonable interpretation of significant drops in the probability of leniency around one year after retirement is that *Revolving door attorneys* are given preferential treatment due to their connections.

Consistent with this interpretation, we find anecdotal evidence that the power of connections is temporary in a market for lawyers. Anecdotal evidence suggests that the entry-level salary of *Revolving door attorneys* reaches ten to fourteen times the salaries they earned in office. After one or two years, however, their rates steeply falls to the level of the salaries of their counterparts in law firms, which suggests that the premium they commanded for their legal services was attributed to privileged connections.

Another notable finding is that leniency disappears when cases are subject to media scrutiny. In the absence of coverage, *Revolving door attorneys'* clients are more likely to be given lighter criminal sanctions. With media coverage, however, the likelihood of leniency dramatically diminishes. Other factors such as expertise and efforts of *Revolving door attorneys* are unlikely to explain this pattern. A sensible interpretation is that this pattern reflects a situation in which outside scrutiny compels judges to refrain from favoritism. This suggests a link between *Revolving door attorneys'* connections and the leniency their clients enjoy. This finding may be interpreted as evidence that the best cure for corruption is openness (Mark and Levitt 2002, Brunetti and Weder 2003, Chowdhury 2004).

Our paper is closely linked to the vast literature on the value of political connections (Fisman 2001; Johnson and Mitton 2003; Faccio 2006; Acemoglu et al. 2012; Ferguson and Voth 2012; Khurana et al. 2012). These studies attempt to assess the value of political connections by observing stock price movements for connected firms in response to political events affecting the connections. For example, Fisman (2001) shows that rumors of Indonesian President Suharto's worsening health condition negatively impact share prices for companies connected to him. Ferguson and Voth (2008) present similar results for German firms affiliated with the Nazi party. Faccio (2006) presents cross-country evidence that the value

of politically connected firms increases when their owners are elected to a top political position, especially in highly corrupt countries.

Our paper complements and enlarges these studies. To begin, while previous studies have highlighted the value of connections, we focus on their power by exploring the extent to which connections influence criminal-sentencing decisions. Second, while many studies focus on the role of connections in the executive or Congress, our work expands such a scope by investigating the role of connections in the judiciary. Moreover, our work differs substantially from the existing literature in establishing a causal link between connections and policy outcomes of interest. Only a few studies in this field have explored whether political connections of firms affect public policy, ranging from corporate bailout (Faccio et al. 2006) to government procurement (Goldman, Rocholl, and So 2013) to bank finance (Khwaja and Mian 2005; Claessens, Feijen, and Laeven 2008). Studies showing a causal relationship between the connections and policy outcomes are very limited. Lastly, even though studies have shown that the behavior of policy makers is influenced by connections, we know less about what determines the functioning of connections. Our work investigates one such mechanism: media scrutiny. This finding contributes to efficient regulations of revolving door phenomena in the public sector.

This paper adds to the literature on the revolving door phenomenon (Vidal, Draca, and Fons-Rosen 2012; Bertrand, Bombardini, and Trebbi 2012). For example, Vidal, Draca, and Fons-Rosen (2012) show that connections to powerful politicians in office mainly determine the revenues of revolving door lobbyists. More specifically, they find that, for those lobbyists with past experience with a U.S. Senator, revenues drop by 24 percent when the former employers leave office. Our finding also confirms that professional connections are scarce assets with money premia but are perishable ones.

Our paper also contributes to the literature on how media coverage alters the behavior of policy makers (Besley and Burgess 2002; Dyck, Moss, and Zingales 2008; Lim, Snyder, and Stromberg 2012). In highlighting the relationship between the media and the judicial behavior, our work is closely related to the work of Lim, Snyder, and Stromberg (2012). They show that the media enhances the responsiveness of sentencing decisions to the public's preferences. They find that non-partisan elected judges are, in the presence of press coverage, tougher on crimes. Yet, these patterns are not observed for appointed judges.

Our paper differs from their work by showing that even appointed judges are not immune to the impact of media coverage (and in turn public preferences). In this vein, our work is in line with Vidal and Leaver (2011) who show that even tenured judges are not perfectly insulated from the public preferences because promotion to higher posts is by nature an outcome of political considerations.

The remainder of the paper is organized as follows. Section 3.2 describes historical and institutional backgrounds. Section 3.3 describes how the data set is constructed. Section 3.4 details the variables and advances three hypotheses to be empirically tested. Section 3.5 presents descriptive statistics of variables of interest. Section 3.6 addresses the basic identification strategy. Section 3.7 provides empirical findings and offers the interpretation of the findings. Section 3.8 concludes.

3.2 HISTORICAL AND INSTITUTIONAL BACKGROUND

3.2.1 Entrance Exam and Two-Year of Training at *JRTI*

Like many other civil law countries (Japan, Ramseyer and Rasmusen 1996 and 2001; France and Spain, Muniz-Arguelles and Fraticelli-Torres 1985), Korea's judiciary features a two-stage judicial selection process: an entrance examination and appointment by the judiciary.

At the first stage, those who want to pursue legal careers must pass a highly competitive entrance exam (the National Judicial Examination).[14] Before 1980, the annual quota was 100; it increased to 300 in 1981, to 500 in 1996 and to 1000 in 2007. Table 3-1 shows that over the last two decades (1993-2011), less than 1 out of 20 (4.3% of) applicants passed the exam. Upon passing the exam, applicants become candidates for judgeship.

[14] Those who would become judges, public prosecutors, and private attorneys usually studies law as an undergraduate major. However, note that no prerequisites for the entrance exam are allowed. Even though applicants without a JD degree can apply for and take the exam. However, judicial (prosecutorial) selection procedures changed from 2009 in Korea.

Table 3-1 Pass Rate for Korean Judicial Entrance Exam

Year	Applicants(A)	Candidates(B)	Annual Pass rate (100 * B/A)
1993	15,516	288	1.9%
1994	16,390	290	1.8%
1995	16,879	308	1.8%
1996	18,572	502	2.7%
1997	15,568	604	3.9%
1998	15,670	700	4.5%
1999	17,301	709	4.1%
2000	16,218	801	4.9%
2001	22,365	991	4.4%
2002	24,707	998	4.0%
2003	24,491	906	3.7%
2004	15,446	1,009	6.5%
2005	17,642	1,001	5.7%
2006	17,290	994	5.7%
2007	18,114	1,011	5.6%
2008	17,829	1,005	5.6%
2009	17,972	997	5.5%
2010	17,028	814	4.8%
2011	14,449	707	4.9%

Notes: Computed by the authors using data of Department of Justice in Korea. "Applicant" represents those who take the National Judicial Examination to pursue legal careers. "Candidate" denotes those who pass the National Judicial Examination.

All candidates must receive two years of training at Korea's Judicial Research and Training Institution *(JRTI). JRTI* functions as a law school; candidates attend courses and take exams; they also receive on-the-job training at prosecutorial offices, district courts, and law firms.

JRTI has been long blamed for strengthening the judicial hierarchy because the hierarchy has been formed and reinforced according to candidates' entering class in *JRTI*. A key example is early retirement, the most distinctive trait of Korea's judicial system. Senior judges who fail to get promoted are asked to retire in order to enhance their junior colleagues' thin prospects for attaining higher ranks.

When Lee Sang-Hoon (class of 1977 in *JRTI*), for instance, became a Supreme Court Justice nominee in 2011, six district or high court chief judges left office. Three of them were his classmates at *JRTI*, and others were from a previous cohort at *JRTI* (their average retirement age was 56).

Upon completing their training in *JRTI*, candidates can choose their career: they may take their jobs in on the bench, in the district attorney office, or in private practice. In general, salaries of private attorneys are known to be higher than those of the judiciary. Since the judiciary, however, offers prestige and power, candidates with the highest grades tend to pursue judicial careers. Thus approximately the top 30% of candidates serve as judges or as prosecutors. Judges are generally drawn from the group of highest performers, which suggests that initial placement within legal careers is indicative of the entrance exam scores and JRTI grades.

3.2.2 Judicial Pyramids

The Korean judiciary is characterized by a pyramidal structure: a very few at the top and most on the bottom. As of 2013, Table 3-2 shows that Korea's judiciary employed 2844 judges in total. Of these, junior judges (of a district or appeal court) account for around 73% (2080 out of 2858).

Table 3-2 Total number of Judges in Korea by Ranks (as of 2013)

	Ranks	Number (%)
Justice	Supreme Court Justice	14 (0.5)
Chief Judge	High Court (or Patent Court) Chief Judge	6 (0.2)
	District Court (or Administrative and Family Court) Chief Judge	24 (0.8)
Senior Judge	High Court (or Patent Court) Senior Judge	117 (4.1)
	Branch Court Senior Judge	39 (1.4)
	District court (or Administrative and Family court) Senior Judge	473 (16.6)
Junior Judge	Law Clerk of Justice	105 (3.7)
	High Court (or Patent Court) Junior Judge	205(7.2)
	District Court (or Administrative and Family Court) Junior Judge	1875 (65.6)
	Total	2858 (100.0)

Notes: Data for the Table comes from Bub-won-jo-jik-bub (*The Judicial Organization Act*).

All junior judges are assigned to their posts by the Supreme Court Chief Justice. They have a 10-year service term, and most are generally reappointed. Judges must halt their work, even in mid-term, when reaching the statutory retirement, age of 65 (70 for Supreme Court Justices).

Most junior judges are elevated to the rank of district court senior judge. [15] However, not all the district court senior judges can attain the next step, high court senior judges.[17] Their career-mobility prospects diminish significantly as the senior judges get closer to the upper posts of the bureaucratic ladder. For instance, high court senior judges face slim chances of promotion to (district or high) court chief judges or to Supreme Court Justices. Table 2 reveals that the number of upper seats available to high court senior judges is at most 40.

Meritocracy is the most fitting keyword that characterizes Korea's judiciary. From *JRTI* candidates to high court senior judges, judicial seniors routinely assess performance of their subordinates. Such meritocracy in the judicial system has numerous advantages: it rewards qualified judges and thereby keeps them from neglecting their duty: it prevents the judiciary from pandering to the public and neglecting minority rights (Maskin and Tirole 2004). Meritocracy, however, has its drawback: it makes the judiciary susceptible to seniority. This occurs because junior judges are aware that they will be ranked on merits based not only on objective factors (e.g., case-processing rate and reversal rate), but also on subjective evaluations.

3.2.3 Number of Revolving Door Attorneys

Table 3-3 documents that from 2000 to 2006, 37 senior judges, on average, left office per year prior to their retirement age, which constitutes 5% of the number of senior judgeship. Such

[15] To be eligible for a district court senior judge, a newly appointed judge generally needs 15 years of experience.
[17] To get promoted to a high court senior judge requires additional 10 year careers.

early resignation pervades Korea's judiciary. Data show that since 1990, only 20 (5) judges (public prosecutors) remained in office up to retirement age, which accounts for 1.3 (0.7) % of 1519 (1353) retired judges during the same period.

Note that early resignation of senior judges is structural: senior judges, especially high court senior judges tend to be pushed out of office owing to pressure from younger groups when they fail to be promoted. Given hierarchical structures and the slim chances of promotion in the judiciary, getting older judges out of the way is the only means of letting younger ones rise, opening a door to thin the bureaucracy's highest ranks.

Table 3-3 also shows that 95% of retirees entered private practice. Surprisingly, even retired Supreme Court Justices serve as private attorneys. More than four out of five (17 out of 20) of retired Supreme Court Justices encounter their former subordinates in court as defense lawyers. Table 3-4 shows that *Revolving door attorneys* account for around 1% of all private attorneys in Korea.

Table 3-3 Total Number of Retired Judges by Rank (2000-2006)

Position prior to Retirement	No. of Retirees	No. of Retirees whose First Post-Retirement Job is Lawyers
Panel A. 2000 to 2006		
Supreme Court Justice	20	17 (85%)
High (District) Court Chief Judge	48	44 (92%)
High court Senior Judge	26	22 (85%)
District court Senior Judge	167	167 (100%)
Junior Judge	236	220 (93%)
Total	497	470 (95%)
Panel B. Annual Average		
Annual Average no. of retired judges	71	67.1 (95%)
Annual Average no. of retired senior judges	37.2	35.7 (96%)

Notes: Computed by the author using data of the Korean Supreme Court. The number in parentheses in Panel A (B) reports the ratio of the total (annual average) number of retirees whose first post-retirement job is a lawyer to the total (annual average) number of retirees from 2000 to 2006

Table 3-4 Total Number of Attorneys and the Share of *RDA*s in Korea (2000-2006)

Year	Number of Attorneys	Number of New Attorneys.
2000	4,228 (1.4%)	341 (20%)
2001	4,618 (1.3%)	390 (17%)
2002	5,073 (1.3%)	455 (15%)
2003	5,586 (1.2%)	513 (13%)
2004	6,300 (1.0%)	714 (10%)
2005	6,997 (1.0%)	697 (10%)
2006	7,603 (0.9%)	606 (11%)

Note: Computed by the author using data of Department of Justice in Korea. The number in parentheses reports the ratio of the annual average number of newly retired "senior judges and prosecutors" to the number of "(new) attorneys". "New Attorneys" denote attorneys who start private practice at the given year. "Senior judge" includes Supreme Court Justice, high (district) court chief judge, and high (district) court senior judge.

3.3 DATA DESCRIPTION[18]

We constructed a unique defendant-level dataset. The dataset includes 270 Korean white-collar offenders. They committed crimes between 1993 and 2006. They were adjudicated between January 2000 and June 2007 in Korea. The dataset involves several high-profile corporate fraud cases involving large family business group such as Samsung, Hyundai Motor Company, and SK group (for a comprehensive list of firms involving crimes, see Appendix Table A 5 List of Firms in our dataset). All our samples were convicted at Korea's lower and high courts.

3.3.1 Definition of White-Collar Crimes

The white-collar crimes in our sample include embezzlement and breach of fiduciary duty under article 356 of Korea's criminal code. This is roughly equivalent to 18 U.S.C. §1341

[18] I take, in part, this description from Choi, Kang, and Lee (2012).

(Frauds and Swindles) or 18 U.S.C. §1343 (Fraud by wire, radio, or television). Accounting fraud cases are included only when offenses occur along with embezzlement and breach of fiduciary duty. The statutory maximum sentence changes with the size of losses. Sentencing prescribed in the law ranges from 1 month to 5 years. When the size of incurred losses surpasses certain thresholds, criminal punishments escalate dramatically (Act on Aggravated punishment, Etc. of Specific Economic Crimes article).[19] For instance, as the losses are between KRW 5 and 5 billion (approximately USD 5 million) , prison sentences jump from 3 to 25 years. Beyond KRW 5 billion, a life sentence can be imposed. Our selection excludes cases below KRW 5 billion.

3.3.2 Data Sources

The basic challenge of our work has indeed been a lack of data. Given the popular interest in *Revolving door attorneys* inside and outside academia, one of the most striking facts is the absence of serious analysis of data. Since the official response of the judiciary is a denial of such favoritism, there is no available official data about *jungwanyeoo*. Several news articles on *Revolving door attorneys* mainly rely on anecdotal evidence or interviews with legal profession. Therefore scholars must painstakingly assemble and gather information from a variety of sources. To construct data, we focus on several high-profile corporate fraud cases, suggesting that our data is not exhausitve. Despite limitation of the data, given that high legal service fees of *Revolving door attorneys* , however, the focus on the high–profile cases allows us a better chance

[19] The act can be found at http://elaw.klri.re.kr/kor_service/lawPopupView.do?hseq=15852,15852#

for studying the impact of *Revolving door attorneys* on the sentencing outcomes. Three sources are:

3.3.2.1 NGO Reports and News Coverage

We were first guided by a series of special reports released by People's Solidarity Participatory Democracy (PSPD) and Solidarity for Economic Reform (SER), civic watchdogs devoted to monitoring corporate fraud in Korea. Their reports detailed information on a modest number of high-profile white-collar crimes. [20] To cover more cases, we turn to media coverage by searching for string {"embezzlement OR breach of fiduciary duty" "court decisions OR sentencing"}.

3.3.2.2 Court Decisions

An extensive review of court decisions offers critical information required to construct a reliable dataset. We first highlight several factors involving offenders: is he/she involved with an affiliate of a business group? is he/she a dominant shareholder or top exectutive? We also identify the key factor related to offenses; the size of losses that defendents inflicted on victims and . These factors are predictive of sentencing outcomes under the Supreme Court's guidelines to which lower courts refer when determining sentences.

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20 The SER's reports can be found at http://www.erri.or.kr/report/report_view.php?code=economy&rpt_seq=16&pageNo=1&searchField=RPT_TTL&searchString=%C8%AD%C0%CC%C6%AE
The PSPD's reports can be found at http://www.peoplepower21.org/PSPD_press/778722

3.3.2.3 Internet Legal Resources

To track defense attorneys' career paths, We relied on *"Lawnb*," Korea's version of Westlaw and Lexis.[21] Through *Lawnb*, We were able to identify when defense lawyers passed the entrance exam; if the lawyers served as judges, what positions they held; and how long they served. Finally, We hone in on only crimes of controlling shareholders and top management. Mid-level managers' misdeeds are outside the scope of this study.

3.4 KEY VARIABLES AND TESTABLE HYPOTHESES

3.4.1 Dependent Variables

This paper first examines as a primary dependent variable a court's adjudication to suspend a jail term. *IMPRISONMENT* is a binary variable; taking on 1 if a convicted defendant receives an actual prison term and 0 if he/she receives a suspended jail term. Why do we focus on suspension of a sentence rather than acquittal? We believe that a focus on a suspended jail term adjudication offers better opportunities to investigate the impact of judicial connections on sentencing decisions. It makes sense to suppose that even though a judge is affected by ties with *Revolving door attorneys*, he/she is unlikely to set a guilty defendant free, which is predicted by studies on corruption. The thoery of corruption (e.g., Arvind 2001) epitomizes corruption as requiring the three elements. First, a public official must have discretionary power. Second, there

21 http://www.lawnb.com/

must be economic rents associated with this power. The third determinant of corruption relies on the likelihood of detection and punishment. In view of the theory, the more likely outcome is that a judge delivers a suspended prison sentence as speicial treatments. First, acquittal decision that favors *Revolving door attorneys* could be reversed by appeal courts.[22] Second, a judge would face intense criticism from the media or Congress, which harms his/her reputation. Moreover, judges in Korea have more discretionary authority than those in the United States. Even though sentencing is within a judge's authority, plea-bargaining and federal-sentencing guidelines serve as tools for checking judges' discretionary powers in the United States. However, Korea's judiciary did not have such arrangements before 2008. Therefore, connections are likely to have more impact on sentencing decisions. Another dependent variable examined here is *IMPRISONMENT LENGTH*, a continuous variable (the unit is a month). By "imprisonment" we mean time spent in confinement. If a defendant receives a suspended jail term, the length of imprisonment is zero.

3.4.2 Explanatory Variables

Table 3-5 documents the main explanatory variables of our data.

[22] In Korea, no double jeopardy.

Table 3-5 Explanatory Variables	
Variable	Definition
Chaebol	In defining the variable *chaebol*, we rely on the administrative definition. For regulatory purposes, Korea Free Trade Commission (KFTC) has, since 1987, publicly announced *chaebols* each year. The criterion has evolved. From 1987 to 2001, KFTC annually ranked the top 30 *chaebols* based on the size of their total combined assets of all affiliates of a *chaebol*. Since 2002, KFTC has adopted a new standard that KFTC designates a *chaebol* as being any business group with the total combined assets of all constitutes of a *chaebol* over KRW 5 trillion (approximately USD 5 billion). The variable *chaebol* takes on 1 if a firm that convicted defendant is involved with is a *chaebol* affiliate, and otherwise 0. [24]
Controlling Shareholder	A controlling shareholder owns sufficient stakes to control a firm. KFTC identifies controlling shareholders of *chaebols*—generally a founder or his family members. Top management here refers to a CEO (or high-profile executive) or a director. A controlling shareholder may serve as a CEO or director of an affiliate. In this case, he is classified as a controlling shareholder. In other words, top executives (or directors) in our sample refer to one without any family ties with a controlling shareholders. The variable *Controlling Shareholder* takes on 1 if a convicted defendant is a controlling shareholder or a member of his family, and 0 if the defendant is a non-family top executive like a CEO, CFO or director.
Loss	In corporate fraud, the size of losses determines the severity of crimes. Economic losses are generally measured by the monetary value of harm that a defendant has caused. The loss calculation is especially of importance when we measure the seriousness of the offenses. Through extensive readings of all court decisions, we can confirm the amount of losses that corporate fraud offenders inflicted and were not recovered before reaching a verdict. For a case with multiple defendants, the total amount of losses is attributed to all of them, suggesting that all defendants charged with the same crime should be jointly responsible for losses. This is consistent with court's sentencing practices; each defendant is held accountable for the entire losses inflicted by crimes in question. In this paper, the variable *Loss* is the log of [the monetary losses+1] (measured by KRW) that a defendant caused a firm and were not recovered before reaching a verdict.

[24] One can access and download information on ***chaebols*** at http://groupopni.ftc.go.kr. All information can be available to the public upon request or through the website.

The Quality of s Legal Representation	This paper presents two measures of evaluation of legal representation available to defendants following Choi, Kang, and Lee (2013):	
	Ex-Senior Judge Lawyers	This measure is a whether defendant hires retired senior-judge attorneys. This binary variable *Ex-Senior Judges Lawyers* takes on 1 if one of defense attorneys is a former senior judge and 0 otherwise.
	Top-10 Lawyers	The measure is whether a defendant hires one or more counsels from top-10 law firms. This binary variable *Top-10 Lawyers* takes on 1 if at least one of defense attorneys works for a top-10 law firm, and 0 otherwise.
	Revolving door attorneys	An ex-senior judge and ex-senior public prosecutor lawyer who takes cases during one year of retirement
Instance	An appeals court, without substantial changes in facts or evidence, tends to lower sentences of a lower court. To capture this effect, the variable *Instance* takes on 1 if a verdict occurs in an appellate court, and 0 in a lower court.	
Media Coverage	This variable is defined by the number of news articles covering a specific defendant from the starting date of an investigation to 1 day before reaching a final verdict. When constructing this variable, we face some challenges. It is not hard to check when a final verdict is reached. A problem arises in specifying when an investigation begins. An investigation is hard to observe from the outside since details of the investigation are not disclosed to the public. This makes me select a range of dates when the cases were investigated. Specifically, we assume that an investigation of a case begins at 6 months before opening the case in court. Given that an investigation is immediately followed by a prosecution, this approach seems plausible. The variable *Media Coverage* takes on 1 if the number of news items about defendants in question is at least one, and 0 otherwise. To construct the variable *Media Coverage,* we use the news site (www.donga.com)	
Survival	The variable *Survival* takes on 1 if a firm for whom a convicted defendant works remains in business, and 0 if a firm goes bankrupt during or after a trial. This variable will be employed as a proxy for wealth of defendants.	
Intrinsic Capability	As explained in Section 3.2.1, initial job placement is a reliable proxy for a defense lawyer's innate talent. The variable *Intrinsic Capability* is a multiple indicator variable takes on 2 if one of defense attorneys was a judge, 1 if one of defense attorneys was a prosecutor, and 0 otherwise.	

3.4.3 Testable Hypotheses

In this paper, we attempt to quantify the influence of connections by empirically testing several hypotheses regarding *Revolving door attorneys*. These hypotheses are as follows:

A. *As the imprisonment possibility increases, white-collar defendants on trial are more likely to hire Revolving door attorneys*
B. *Convicted white-collar defendants represented by Revolving door attorneys are more likely to get lighter punishment (i.e., higher probability of suspending jail terms or shorter prison terms)*
C. *Whether a judge favors Revolving door attorneys depends on media scrutiny*

As explained earlier, the second hypothesis can be easily put forward from *several news articles on Revolving door attorneys* and the last one rests on what is predicted by the theory to confirm corruption. The first hypothesis can be readily drawn from the main feature of white-collar criminals. The reason the problems related to *Revolving door attorneys* burgeon in imposing sentences essentially grows out of the non-linearity of the payoff function for defendants. While there is little difference between actual and suspended jail terms in the payoff function for judges, for white-collar offenders there is a sharp distinction between them. [25] Therefore the first best strategy for accused corporate offenders is to obtain the judgment of acquittal but receiving a suspended jail term is not only the second best strategy but also the most feasible one.

[25] This claim is consistent with views of U.S. sentencing commission, which acknowledged that the sentencing guidelines were written, in part, to "ensure a short but definite period of confinement for a larger portion of these 'white collar' cases, both to ensure proportionate punishment and to achieve deterrence " See Fifteen years of Guidelines Sentencing 56 (2004).

3.5 DESCRIPIVE STATISTICS OF KEY VARIABLES

3.5.1 Criminals

The dataset used for this study is a defendant level. The dataset consists of 270 observations. Panel B in Table 3 reports that 155 defendants were convicted in district courts. Of the 155, 50 defendants were sentenced to actual prison terms, whereas 105 were given suspended jail terms. Then, 42 defendants subject to actual prison terms appealed to high courts. Of 105 criminals receiving suspended jail terms in district courts, 58 moved to appeal courts because prosecutors appealed against light sentences. In addition, we have 15 defendants whose cases involve appeal courts only. Therefore, the total number of defendants in high courts amounts to 115 (see Panel C in Table 3 6), which ends up with 270 in total as seen in Panel A in Table 3-6.

Table 3-7 breaks down our dataset by the convicted defendants' social and occupational status. *Chaebol*-related criminals account for 57% of the dataset (155 out of 270) and non-chaebol 43% (115 out of 270). Controlling shareholders make up 49 % of my dataset and hired CEOs 51%.

Table 3-6 White- Collar Criminals by Affiliation and type of Punishment

Panel. A : White-collar criminals by type of punishment (n=270)

	Suspended jail term		Actual jail term	
	Non- *Chaebol*	*Chaebol*	Non- *Chaebol*	*Chaebol*
Top Management	42	84	4	8
Controlling Shareholder	35	33	34	30
Subtotal	77	117	38	38
Total	194		76	

Panel. B : White-collar criminals by type of punishment: low court cases (n=155)

	Suspended jail term		Actual jail term	
	Non- *Chaebol*	*Chaebol*	Non- *Chaebol*	*Chaebol*
Top Management	22	54	4	7
Controlling Shareholder	14	15	20	19
Subtotal	36	69	24	26
Total	105		50	

Panel. C : White-collar criminals by type of punishment: high court cases (n=115)

	Suspended jail term		Actual jail term	
	Non- *Chaebol*	*Chaebol*	Non- *Chaebol*	*Chaebol*
Top Management	20	30	0	1
Controlling Shareholder	21	18	14	11
Subtotal	41	48	14	12
Total	89		26	

Note: A controlling shareholder is generally a founder of a firm or his/her family members. Top management refers to a CEO (or high-profile executive) or director. A controlling shareholder may serve as a CEO or director of an affiliate. In this case, he is classified as a controlling shareholder, suggesting that Top management is a non-family CEO (or director).

Table 3-6 suggests that *chaebol*-related offenders are less likely to receive prison sentences than non-*chaebol* offenders; Table 3-6 – Panel A shows that a little over a quarter of guilty defendants (76 out of 270, 28.1%) served prison terms. Of the *chaebol*-related offenders, 24.5% (38 out of 155) were given prison sentences; of their non-*chaebol* counterparts, 33.0% (38 out of 115) received prison sentences. In lower courts, 27.3 % (26 out of 95) of *chaebol*-related offenders went to prison whereas 40% (24 out of 60) of non-*chaebol* counterparts were held in jail. In high courts, sentencing disparities between *chaebol* and non-*chabol* criminals appeared to decrease. 19.3% (12 out of 62) of *chaebol*-related offenders went to prison whereas 26.4% (14 out of 53)of non-*chaebol* counterparts were held in jail.

Table 3-7 Types of White- Collar Criminalsby Position and type of Affiliation

	Chaebol	Non-*Chaebol*	Total
Controlling shareholder	63	69	132
Top management	92	46	138
Total	155	115	270

Note: A controlling shareholder is generally a founder of a firm or his/her family members. Top management refers to a CEO (or high-profile executive) or director. A controlling shareholder may serve as a CEO or director of an affiliate. In this case, he is classified as a controlling shareholder, suggesting that Top management is a non-family CEO (or director).

3.5.2 Defense Attorneys

Table 3-8 shows that the average defendant hires around 4 defense counsels on average. Of the 4 defense counsels, 1.8 is the avearge number of retired senior judges; the average number of *Revolving door attorneys* is 0.6.

We also observe differences in the quality of legal counsel between *chaebol*-related defendants and non-*chaebol* ones. As seen in Panel-B and Panel-C, *chaebol*-tied defendants

received, by every measure, more qualified legal assistance. As explained earlier, the differences are attributed to the fact that *chaebol*-connected defendants have much stronger incentives to evade jail and they are also affordable enough to pay high legal fees.

Table 3-8 Defense Attorneys

	Lawyers	*TOP-10 Law Firm Lawyers*	*Ex-Senior Judge Lawyers*	*Revolving door attorneys*
Average Number of Total observations	4.1	2.4	1.8	0.6
Average Number of Total Observations (*chaebol* Samples)	4.3	3.1	2.1	0.7
Average Number of Total Observation (non-*chaebol* sample)	3.7	1.4	1.4	0.4

Note 1: All information is defendant-level data.
Note 2: "Lawyer" represents private attorneys that each defenant hires."*Top-10 Law Firm Lawyer*" denotes counsels from a top 10 law firm that each defenant hires. *"Ex-Senior Judge Lawyer"* represents counsels with "senior judge" and "senior public prosecutor" experience that each defenant hires. "Senior judge" includes the Supreme Court Justice, high (district) court chief judge, high (district) court senior judge. "Senior public prosecutor" includes the prosecutor general, a chief of high (district) public prosecutor's office, and high (district) court senior prosecutor.
"*Revolving door attorney "* denotes *an Ex-Senior Judge Lawyer* who takes cases during one year of retirement.

3.5.3 Other Variables

Table A 1 reports some descriptive statistics for other variables of interest. The criminals inflicted, on average, $2.2 billion economic losses to shareholders, firms, and outside investors; however, the median is $15.1 million. This huge disparity is attributed to bankruptcy of Daewoo, the second largest conglomreate in 1997. The criminals were sentenced to, on average, 33-month-prison terms. Once suspended prison sentences are excluded, the average actual imprisonment length sentenced extends to 45 months. The longest prison length is 8 years. The amount of available press coverage varies tremendously, from none to 177 per case. Its median value is zero, suggesting that media pays disproportionate attention to some high-profile defendants.

3.6 IDENTIFICATION STRATEGY

The main objective is to relate the professional ties of defense attorneys to sentencing results. A naive attempt to estimate this relation is as follows.

$$\textit{Sentencing Decision} = b_0 + b_1\,\textit{connections} + b_2' X + e \qquad \text{(A)}$$

Where **X** is a vector of controls that contain several factors related to the nature of the crime or the defendant's profile: *Chaebol, Controlling Shareholder, Loss, and Instance* variables . However, estimation of the naive equation by a Probit (or Tobit) model may generate problems. The presence of unobserved innate talent of defense counsel is likely to bias the estimate of b_1 upwards. It seems reasonable to think that offenders represented by lawyers with high intrinc capability will be more likely to receive lighter criminal sentences. The first step in our identification strategy therefore is to address this concern. Undestanding the judicial appointment procedure offers a plausible solution to this problem. As was shown in Section II, the initial job placement for young jurists is indicative of entrance exam scores and *JRTI* grades. Since these factors are set when young jurists begin their legal careers, initial job placement is a plausible proxy for innate ability of defense attorneys. Moreover, the highly competitive evironment of the entrace exam and *JRTI* drive all candidates to make their best efforts. This suggests that variation in the first job placement after *JRTI* reflects the differences in instinsic talent among attorneys, rather than the differences arising from endogenous effort decisions.[28] In other words, since

28 J. Ramsyer (2012) presents three proxies for judicial talent: (1) the selectivity of the university a judge attends (2) the number of years a judge failed the entrance exam to the LRTI, and (3) the fact that LRTI students work as interns in the courts.

initial placement of each candidate was determined before his judicial experience, this serves as a proxy for innate cognitive ability of defense attorneys.

The next step is to define the connections. As explained earlier, if we just define the connections based on judicial careers of attorneys, this is not hard work. It may be, however, a challenging task to define corruption in a way that connections should be distinguished from the skills of defense attorneys. To address this problem, we borrow ideas from the existing studies on lobbying and corruption.

Why does our empirical strategy rely on studies of lobbying? This is because *Revolving door attorneys* are closely analogous to revolving door lobbyists in a lobby industry. The primary reason people is willing to hire *Revolving door attorneys* is due to the public belief that they have previleged access to sitting judges through the attorneys. This is why *Revolving door attorneys* are paid a large premium in a market for lawyers, as explained below in detail. This structual similarity allows us to refer to findings in research on lobbying in estabilishing a reliable empirical strategy. A general consensus of this line of research is that connections are valuable assets but not permanent ones. In particular, many studies on political connections show that the value of political connections is highly volatile in response to events affecting their connectedness (e.g. a rumor that a health condition of a dictator is very serious , or a news that a connected politician leaves office). In our context, such events are likely to occur each year due to prevalent early retirement practices in the judiciary. The annual entry of newly retired senior judges into a market for attorneys renders judicial connects of incumbents almost obsolet. In addition to a legislative regulation as mentioned in in Section I, several news articles and interviews with legal profession also confirm such time-variation features of judicial connections.

Keeping these facts in mind, we will employ the length of retirement as a source of exogenous variation that affects the power of ties between *Revolving door attorneys* and the judiciary. Since the date of their resignation is orthogonal to the time-invariant inherent ability or expertise of the counsels, this offers us a plausible identification strategy. In particular, we split ex-senior-judge lawyers (hereafter ESJLs) by their retirement length; *ESJLs* who take cases within one year of retirement (*Group 1 Lawyer*, i.e., *Revolving door attorneys*); *ESJLs* who represent cases between one year and two years after retirement (the variable *Group 2 Lawyer*); *ESJLs* who plead cases more than two years after retirement (the variable *Group 3 Lawyer*).

These latter groups of lawyers whose personal connections have weakened will be the reference control group in regressions to follow. If retirement length determines special treatment as is generally assumed, we should expect a noticeable downfall in the likelihood of leniency up to one year after retirement. We arrive at the following specification:

$$\textbf{\textit{Sentencing Decision}} = b_0 + b_1\ \textbf{\textit{Revolving Door Attnorey}} + b_2\ \textbf{\textit{Group 2 Lawyer}} + b_3\ \textbf{\textit{Group 3 Lawyer}} + b_4'\ \mathbf{X} + \textbf{\textit{Intrinsic Capability}} + e \quad \text{(B)}$$

The final identification strategy employs knowledge of the mechanisms through which unethical behavior is more likely. Studies document that corruption reacts to media scrutiny or public monitoring. This idea offers a chance to exploit variation across clients who employ individual lawyer**.** If leniency is the upshot of active connections, the impact of *Revolving door attorneys* on the likelihood of leniency should disappear as outside scrutiny increases. On the contrary, if leniency is the upshot of defense attorneys' skill, the effect of *Revolving door attorneys* on the likelihood of leniency will not vary with the level of public scrutiny, or

alternatively may increase with media coverage. In sum, if *Revolving door attorneys* have better trial outcomes than other counsels (first difference) in circumstances that are more likely to allow for favoritism than other circumstances (additional difference), then it is more likely that favoritism has been identified.

$$\textit{Sentencing Decision} = b_0 + b_1\,\textit{REVOLVING DOOR ATTORNEY} + b_2\,\textit{REVOLVING DOOR ATTORNEY} \times \text{Media Coverage} + b_3\,\textit{Group 2 Lawyer} + b_4\,\textit{Group 2 Lawyer} \times \text{Media Coverage} + b_5\,\textit{Group 3 Lawyer} + b_6\,\textit{Group 3 Lawyer} \times \text{Media Coverage} + b_7\,\text{Media Coverage} + b_8'\,X + \textit{Intrinsic Capability} + e \quad (C)$$

3.7 RESULTS

3.7.1 The Impact of Judicial Connections on Sentences

Table 3-9 displays the estimates of regression (C). In Columns (1) and (2) are the estimates for the model controlling for Covariates X (and intrinsic capability of defense attorneys). All covariates are included in the specifications, but not shown in the Table.

Table 3-9 The Impact of *Revolving door attorneys* on Sentences

Dependent Variable : Sentencing Outcome		
	(1) *IMPRISONMENT*	(2) *IMPRISONMENT LENGTH*
Revolving door attorneys	-.90** (.40)	-34.6** (13.7)
Revolving door attorneys × Media Coverage	.95* (.57)	39.1** (18.6)
GROUP 2 Lawyer	.23 (.39)	5.2 (12.3)
GROUP 2 Lawyer × Media Coverage	-1.01* (.59)	-17.2 (20.7)
GROUP 3 Lawyer	-.02 (.36)	-7.8 (11.1)
GROUP 3 Lawyer × Media Coverage	.01 (.54)	6.9 (17.3)
Media Coverage	.27 (.54)	.6 (14.3)
Observations	270	270

Note 1: Covariates include the variable C*haebol, Controlling Shareholder, Loss, Instance. Intrinsic Capability* is also included. The results of (1) and (2) from probit and tobit, respectively. Robust standard errors are in parentheses. ***, ** and * indicate coefficients significantly different from 0 at the 1%, 5% and 10% levels, respectively.
Note 2: A dependent variable is *IMPRISONMENT*, a dummy variable taking 1 if a convicted offender receives an actual jail term and 0 if he/she receives a suspended one. Another dependent variable is *IMPRISONMENT LENGTH*, measured by months of prison terms.
Note 3: "*Revolving door attorney"* is a dummy variable taking 1 if one of the defense attorneys is an *"Ex-Senior Judge Lawyer"* (ESJL, lawyers with "senior judge" and "senior public prosecutor" experience) who takes cases within the first year of retirement: GROUP 2 Lawyer is a dummy variable taking 1 if one of the defense lawyers is an ESJL who takes cases between one year and two years after retirement. GROUP 3 Lawyer is a dummy variable taking 1 if one of the defense lawyers is an ESJL who takes cases more than two years after retirement. "Senior judge" includes the Supreme Court Justice, high (district) court chief judge, high (district) court senior judge. "Senior public prosecutor" includes the prosecutor general, a chief of high (district) public prosecutor's office, and high (district) court senior prosecutor.
Note 4: "Media Coverage" is constructed based on by the number of news articles covering a defendant from a starting date of investigation to one day before reaching a final verdict. Specifically a dummy variable *Media Coverage* takes 1 if the number of news articles about defendants in question is at least one, and 0 otherwise. An investigation of a case is assumed to begin at 6 months before opening the case.

We find that *Revolving door attorneys* significantly increase the likelihood that their clients are given leniency. The effect of *Revolving door attorneys* is sizable. Convicted white-collar offenders with *Revolving door attorneys* are more likely to receive suspended jail terms by about 15 percent points than ones with non-connected counsels. In addition, convicted corporate

offenders defended by Revolving door attorneys serve shorter jail terms by 24 months relative to those represented by ordinary lawyers without connections.

Table 3-9 also presents evidence on a time-sensitive feature of judicial ties. The results show that the effect of *Revolving door attorneys* on leniency discontinues approximately one year after retirement; not even ex-senior judge attorneys who take cases more than one year after having resigned raise the likelihood of leniency for their clients: control groups (*Group 2 and 3 Lawyers* in our regressions*)* have little influences on the likelihood of lighter punishments.

How should we interpret these results? There is no plausible evidence to suggest that *Revolving door attorneys* are more competent than the two groups of counsels because these control groups share a considerable amount of similarity in their career paths: graduates of the several selective universities, the most exceptional candidates at *JRTI*, and elites in the judiciary. This suggests that the observed variance in the likelihood of lenient sanctions among these three groups of lawyers is unlikely to reflect the differences in their professional expertise (or intrinsic capabilities). Thus, a reasonable interpretation of the sudden drops in the odds of leniency around one year after retirement is that the judiciary gives *Revolving door attorneys undue* preferential treatment. If the connections of *Revolving door attorneys* are time-sensitive, we expect *Revolving door attorneys* to suffer considerable declines in their incomes after one year of exit from the judiciary.

Upon retirement, by how much surge in salaries do *Revolving door attorneys* enjoy? Data on the amount of fees that *Revolving door attorneys* charge their clients is not generally accessible, but using several sources, their post-retirement salary can be estimated. The first source is their self-disclosure. All nominees for high-profile positions (of the executive or of the judiciary) are required to disclose their financial status. Once they are appointed, they also must

file public reports of their finances during their terms. This allows us to track income variations by their career history.

For instance, when Lee Gang-Gook, a former Justice was nominated to be the Constitutional Court Chief Judge in 2005, he acknowledged in his confirmation hearing that he was paid USD 44,000 monthly from a law firm. More direct data on the revenues of *Revolving door attorneys* comes from their social security records. In Korea, the social security administration keeps track of earnings because social security is generally financed through income. Table 3-10 shows the amount of a starting salary for *Revolving door attorneys*. This allows us to draw a direct comparison of the salary between the public and private sector. A direct comparison reveals that a salary [29] rises up from ten to fourteen-fold right after senior retirees are reemployed in the private sector, suggesting that *Revolving door attorneys* are effectively cashing in on their judicial connections. [30]

Table 3-10 Monthly Salary of Former Senior Judge Lawyers (as of 2008)

Post prior to Resignation	Salary prior to Resignation(A)	Starting Salary (B)	B/A
Supreme Court Justice	6,800	80,000	11.7
High Court Chief Judge	6,400	95,000	14.8
District Court Chief Judge	6,400	69,000	10.7
High Court Senior Judge	6,400	72,500	11.3

Note: Data on starting salaries is based on social security records. "Starting salary" denotes an entry-level monthly salary of former "senior judge" attorneys in the private sector. Information on monthly salaries of judges is obtained from the Judicial Organization Act (*Bubwonjojikbub*). The unit of salaries is KRW 1000, which roughly corresponds to USD.

[29] As of 2008, South Korea's GDP per capita is USD 28,000 which corresponds to USD 2,300 per month, and the Korean top 1 percent income is USD 360,000 which corresponds to USD 30,000 per month.

[30] More relevant comparison appears to be one made between retirees and their counterpart in private law firms, i.e., attorneys without judicial career. But direct comparison is hard to make because their counterpart in law firm are more likely to be associates or partners whose compensation structure is totally different.

Prior to a full-fledged analysis, note that this data present indirect evidence on *Revolving door attorneys*. A notable point is that a former Supreme Court Justice earned less than a former High Court Chief Judge. The differences in legal expertise are unlikely to explain this "reversal of fortune" because the former is a more qualified jurist than the latter. The plausible interpretation is, therefore, that retired Justices or several high-profile judges settled in law firms tend to engage in "consulting and related services" rather than a legal proceeding in a court, which suggests that law firms invent strategy that high-profile retirees use their influence to solicit customers and then leave the actual legal battles to juniors in the law firms. [31]

One year after resigning, however, their salary drops to a level comparable to their peers in the private sector, which suggests that the premium that they command for legal services is sort of a rent associated with privileged connections.

"N*ewly retired lawyers in large law firms says that, the law firms earn on average annual revenue of three million dollar by hiring one Revolving door attorneys (e.g., a high court senior judge)." The law firm share earnings with Revolving door attorneys from 50 to 50, to 70 (Revolving door attorneys) to 30 (the firm), converting an annual salary of 1.2 to 1.3 million dollar for the attorneys. However, such a high salary is not permanent. After at most two years of their entrance into markets for lawyers, Revolving door attorneys' earnings are known to plunge to 0.1 to 0.2 million dollar".*[32]

[31] In this respect, some *Revolving door attorneys* fit "shadow lobbyists", lobbyists evading legal requirement to register and file regular activities and their funding (Wedel 2012, p483)

[32] http://www.fnnews.com/view?ra=Sent1201m_View&corp=fnnews&arcid=201302190100161980009158&cDateYear=2013&cDateMonth=02&cDateDay=19

Another piece of anecdotal evidence illustrates that after one or two years of a "grace period", *Revolving door attorneys'* compensation structures turn into those of regular law firm members, suggesting that such high entry-level salaries are not guaranteed any more and they are paid based on their contributions to law firms' earnings. [33]

Supplementary anecdotal evidence also reinforces our finding that the power of connections is subject to decay. For instance, Kang Byoung-seob, a former Seoul district court chief judge, resigned in August 2004. Between 2004 and 2005 he worked as a sole practitioner and in 2006 joined one of the top 10 law firms. This example appears to reflect a situation in which Mr. Kang exclusively reaped benefits from his former position and then during the second year of retirement entered a law firm so as to maintain his revenues, which otherwise would have dropped due to weakening connections. Taken together, the evidence above provides support for the hypothesis that *Revolving door attorneys* are given undue preferential treatment for their connections.

A remaining question arises as to the fleeting feature of favoritism: why one year only? Two explanations might serve as plausible answers. On one hand, this feature seems connected to the steady, annual stream of retired senior judges flowing into the lawyer market. As explained earlier, the early retirement practices of senior judges are stable in Korea, which implies that new *Revolving door attorneys* start private practice every year, rendering outdated the connections of old *Revolving door attorneys* .

On the other hand, the social psychology of corruption (Benerjee, Mullainathan, and Hana 2012) is likely to answer this question. They argue that "to fully understand how corruption becomes norm, there is a need to try to understand the psychology of when and where people

33 http://news.mk.co.kr/newsRead.php?year=2013&no=696818.

feel more or less comfortable about engaging in corruption (Banerjee, Mullainathan, and Hana 2012 p. 64)." They claim that the key psychological factor is "a tendency to try to legitimize corruption." This argument is relevant to our institutional setting. Note that within the judiciary, *jungwanyeoo* has long been excused as "giving senior small gifts." In this respect, one-year special treatment is sufficient. Indeed, entry-level salaries of *Revolving door attorneys* are equivalent to what they took several years to earn in office. The first year salary resembles a one-time retirement bonus. Therefore, if preferential treatment is repeatedly given to specific *Revolving door attorneys* for more than one year, this is no longer *petit favor***,** which makes judges uncomfortable about favoring the attorneys.

3.7.2 The Impact of Media Scrutiny on the Power of Connections

Now we investigate our third hypothesis. To study what determines the extent to which professional links influence sentences, we interact several proxies for legal representation of convicted criminals with the publicity dummy variables. We find that the influence of *Revolving door attorneys* on sentencing outcomes changes with media scrutiny. As Table 3-11 and Table 3-12 show, the attorneys raise the probability that their clients get lighter criminal sanctions when no media coverage exists. If media covers cases, these impacts are nullified.

To further examine the impact of media coverage on the influence of connections, we introduce another control group, defense counsels of a top 10 law firm. There are at least two reasons why top 10 law firm lawyers can be a comparison group. First, in terms of the expertise required to defend criminals, they are similar to *Revolving door attorneys.* About 66% of Group

2 and 3 Lawyers (81 out of 120) are employees in a top 10 law firm.[34] In addition, elite law firms have many experts specializing in criminal law and considerable resources, which leads to more leniency for defendants. The other reason is that an analysis of the defense counsels of a top 10 law firm offers another chance to understand the relationship between connections and media publicity. Table 3-11 and Table 3-12 show that defense attorneys of a top 10 law firm help lower the risks of incarceration only when the media covers their cases. Note that this observation starkly contrasts with that of *Revolving door attorneys* in Subsection B**.**

Table 3-11 Impact of Media Coverage on the Power of Connections

Dependent Variable : Sentencing Outcome		
	(1) IMPRISONMENT	(2) IMPRISONMENT LENGTH
Revolving door attorneys	-.69* (.37)	-22.9* (13.6)
Revolving door attorneys × Media Coverage	.39 (.53)	14.8 (18.0)
Top-10 Lawyer	.44 (.35)	14.1 (11.4)
Top-10 Lawyer × Media Coverage	-1.29** (.54)	-38.6** (16.9)
Media Coverage	.77* (.41)	22.6* (13.6)
Observations	270	270

Note 1: Covariates include the variable C*haebol, Controlling Shareholder, Loss, Instance, and Intrinsic Capability*. The results of (1) and (2) from probit and tobit, respectively. Robust standard errors are in parentheses. ***, ** and * indicate coefficients significantly different from 0 at the 1%, 5% and 10% levels, respectively.
Note 2: A dependent variable is *IMPRISONMENT*, a dummy variable taking 1 if a convicted offender receives an actual jail term and 0 if he/she receives a suspended one. Another dependent variable is *IMPRISONMENT LENGTH*, measured by months of prison terms.
Note 3: "*Revolving door attorney"* is a dummy variable taking 1 if one of the defense attorneys is an *"Ex-Senior Judge Lawyer"* (ESJL, lawyers with "senior judge" and "senior public prosecutor" experience) who takes cases within the first year of retirement: GROUP 2 Lawyer is a dummy variable taking 1 if one of the defense lawyers is an ESJL who takes cases between one year and two years after retirement. GROUP 3 Lawyer is a dummy variable taking 1 if one of the defense lawyers is an ESJL who takes cases more than two years after retirement. "Senior judge" includes the Supreme Court Justice, high (district) court

[34] Note that *Revolving door attorneys* from top-10 law firms are classified as *Revolving door attorneys*, which implies that top 10 law firm lawyers and *Revolving door attorneys* are mutually exclusive.

chief judge, high (district) court senior judge. "Senior public prosecutor" includes the prosecutor general, a chief of high (district) public prosecutor's office, and high (district) court senior prosecutor.
Note 4: "Media Coverage" is constructed based on by the number of news articles covering a defendant from a starting date of investigation to one day before reaching a final verdict. Specifically a dummy variable *Media Coverage* takes 1 if the number of news articles about defendants in question is at least one, and 0 otherwise. An investigation of a case is assumed to begin at 6 months before opening the case.

This pattern is unlikely to be explained by the expertise or efforts of *Revolving door attorneys.* A plausible interpretation is that this pattern reflects a situation in which judges respond to outside monitoring, as one would expect from theory to confirm corruption As many studies on corruption document (Mark and Levitt 2002, Brunetti and Weder 2003, Chowdhury 2004), increased monitoring reduces corruption. Therefore, our results can be interpreted more broadly to suggest that the best cure for corruption is openness.

Table 3-12 Impact of Media Coverage on the Power of Connections

Dependent Variable : Sentencing Outcomes				
	No Media Coverage		Media Coverage	
	(1) IMPRISONMENT	(2) IMPRISONMENT LENGTH	(3) IMPRISONMENT	(4) IMPRISONMENT LENGTH
Revolving door attorney	-.97** (.42)	-35.6** (15.3)	-.45 (.38)	-10.9 (11.6)
Top-10 Lawyer	.25 (41)	4.8 (13.4)	-.89** (.44)	-23.1* (13.5)
Observations	149	149	121	121

Note 1: Covariates include the variable C*haebol, Controlling Shareholder, Losses, Instance, and Intrinsic Capability.* The results of (1) and (3) from probit and (2) and (4) from tobit, respectively. Robust standard errors are in parentheses. ***, ** and * indicate coefficients significantly different from 0 at the 1%, 5% and 10% levels, respectively
Note 2: **"**Media Coverage case**"** denotes case in which the number of news articles about defendants in question is at least one, and **"**No Media Coverage**"** represents cases in which the number of news articles about defendants in question is 0.
Note 3: A dependent variable is IMPRISONMENT, a dummy variable taking 1 if a convicted offender receives an actual jail term and 0 if he/she receives a suspended one. Another dependent variable is IMPRISONMENT LENGTH, measured by a month of prison terms.
Note 4: "*Revolving door attorney"* is a dummy variable taking 1 if one of the defense attorneys is an *"Ex-Senior Judge Lawyer"* (ESJL, lawyers with "senior judge" and "senior public prosecutor" experience) who takes cases within the first year of retirement. "Senior judge" includes the Supreme Court Justice, high (district) court chief judge, high (district) court senior judge. "Senior public prosecutor" includes the prosecutor general, a chief of high (district) public prosecutor's office, and high (district) court senior prosecutor. "Top-10 Lawyer" takes on 1 if at least one of the defense attorneys works for a top-10 law firm, and 0 otherwise. Note that *Revolving door attorneys* from a top-10 law firm are classified as *Revolving door attorneys.*

There appears to be several channels through which media publicity substantially limits the power of connections:

Elitism: high-profile judges seem to have a strong ego as elites. They do not want to see their name on the front page of newspapers for favoring their friends, a dishonor to self-esteem.

Pandering: Media coverage makes the preferences of judges more aligned with those of the public (Lim, Snyder, and Stromberg 2012). The judiciary has long been blamed for excessive leniency towards tycoons. [35] Media scrutiny over high-profile cases leads judges to pander to the preference of the public, harsher sentences against powerful defendants.

Career concerns: Career concerns may dissuade them from sinking into corrupt practices. If a judge, for example, especially favors his former senior colleague, a current defense attorney, this may hurt his reputation. His marred reputation negatively affects their promotion prospects. Indeed, public resentment trumps favoritism given to *Revolving door attorneys***.** These career concerns get more serious especially when cases are more subject to media coverage, suggesting that the cases involve high-profile, white-collar offenders.

Relatedly, it is important to note that even in civil law, when reaching the final stage of their career paths, judges seeking promotion need to satisfy not only their senior colleagues but also various audiences, especially outside the judiciary such as politicians and the press. [36] As a

[35] In June 2012, for instance, during a confirmation hearing, the Supreme Court Justice nominee Kim chang-seok was under severe attack for his pro-Samsung rulings. Lee gun-hee, the Chairman of the Samsung business group was charged with evading tens of millions of dollars in taxes and embezzling corporate money. A nominee, a Seoul Appeal Court Senior judge gave a suspended 3 year jail term even if he acknowledged that the economic losses incurred by Mr. Lee were larger than the amount a lower court had confirmed by 22.7 million dollars. In his confirmation hearing, he was challenged repeatedly by lawmakers for a series of pro-business and anti-labor union ruling. After the confirmation hearing, the opposition party announced the statement questioning nominee Kim's qualification out of concerns that he was more likely to tilt the Supreme Court in favor of large corporations. Even though a congress approved Mr. Kim to be a new Justice, the observation of the confirmation hearing is sufficient to drive prospective nominees to be concerned about external audiences

[36] Following Garoupa and Ginsburg (2011), the audiences refer to "other branches of government, lawyers, law professors, and the public more generally".

consequence, this makes promotion-motivated senior judges more responsive to the public's preferences.

This analysis is also relevant in Korea when we consider the procedures of appointment to Korea's Supreme Court: the Justice nominees are appointed by the president after confirmation by Congress. Recall that leniency given to convicted white-collar criminals is a manifestation of unequal treatment of law. Knowing the public concerns about leniency toward corrupt tycoons, promotion-motivated judges tend to be tougher on white-collar criminals.

Our interpretation is that these differences are attributed to the differences in incentive structures between the two defense counsel groups. When high-profile criminals (who are generally subject to more media coverage) are sentenced to jail terms, switching to other elite law firms is common because among name brand law firms considerable differences in talent are unlikely to exist. Imprisonment hence could be a big blow to an elite firm. This drives attorneys of a top 10 law firm to be more sensitive to sentencing outcomes when cases draw media scrutiny. An alternative explanation is that increased publicity should further deepen the desire to be renowned for belonging to a top 10 law firm. Winning leniency in more egregious cases signals their potential to the market, leading to better job prospects. In contrast, publicity neutralizes the influence of connections for Revolving door attorneys.

3.7.3 Different Comparison Groups: Ex-Junior Judge Lawyers and "narrowly defined *Revolving Door Attorneys*"

In **Table 3-13**, we re-run our baseline regression by adding, as a new control group, ex-junior judge lawyers. The result in Table 13-A shows that the judiciary does not favor one-time junior judges: the criminals who are assisted by counsels with junior judge experience are given

no leniency. Unlike for the cases with *Revolving door attorneys*, for cases with ex-junior-judge attorneys any discontinuity in the likelihood of leniency was not observed approximately a year following their exit. This finding implies that special favors are exclusive to retirees who reached the level of at least district court senior judges.

This result is interpreted as evidence that hierarchical relationship is one of key determinants of *jungwanyeoo*. The main advantage of such interpretations is to clearly explain why an ex-junior judge attorney is not eligible for special treatment from the court: juniors never remained at the top of the judicial ladder in which they established hierarchical relationship with their subordinates. In addition, this finding can be interpreted as evidence that special treatment is a "deferred compensation" for long service that junior judges cannot reap.

An alternative interpretation is that favors revolving door attorneys receive is severance pay for which early-retired senior judges are eligible. In the name of tradition, early resignation is prolonged for long in the judiciary. Early retirement mainly benefits remaining younger judges because given the strictly hierarchical judiciary, getting old judges out of the way is to let younger ones rise, opening a door to thin bureaucracy's highest ranks. In this respect, *jungwanyeoo l*eads senior judges in office to leave office before a retirement age because their sacrifices will be rewarded with special treatment from judges in office.[37]

In additional effort to shed light on the channel through which connections function in the judiciary, we repeated a regression by including different comparison groups: "narrowly defined *Revolving door attorneys*." Narrowly defined *Revolving door attorneys* refer to situations where *Revolving door attorneys* take cases that occurred under their former jurisdictions. Narrowly defined *Revolving door attorneys* have been blamed for the most blatant forms of unethical

[37] As Koh (1989) about *amakudari*, unless the practice of early retirement ceases,

behavior because sitting judges were subordinates or same-seniority colleagues of *Revolving door attorneys*.

In addition, hiring "narrowly defined *Revolving door attorneys"* reflects a situation in which lawyers are strategically selected to exploit deeply personalized relationships between lawyers and sitting judges. This interpretation is also consistent with the work of Khurana et al. (2012). They estimated the market valuation of personal connections to former U.S. Vice-President Richard Cheney, using the stock market returns of companies with personal connections to him. Their finding was that contrary to the public belief, the value of ties to Cheney is estimated precisely as zero. They interpret this finding as evidence that frequent media reports of potential conflicts of interest between Cheney and connected firms kept him from favoring companies with which he had personal connections. We interpret this as evidence that career concerns are effective at controlling rent-seeking through personal ties with high-level public officials.

Table 3-13 Comparison Group: Ex-junior judge Attorneys

Dependent Variable : IMPRISONMENT				
	(1)	(2)	(3)	(4)
Revolving door attorneys		-.94*** (.33)		-.89*** (.29)
Revolving door attorneys × Media Coverage		1.36*** (0.47)		1.29*** (0.35)
Ex-Junior Judge Attorneys	.33 (.37)	-.01 (.39)		
Ex-Junior Judge attorneys × Media Coverage	.17 (.53)	.76 (.58)		
Newly Retired Junior Judge Attorneys			1.04* (.55)	.68 (.54)
Newly Retired Junior Judge Attorneys× Media Coverage			-.48 (.73)	.39 (.76)
Media Coverage	.46* (.23)	-.14 (.33)	.52** (.21)	.00 (.28)
Observations	270	270	270	270

Note 1: Covariates include the variable C*haebol, Controlling Shareholder, Loss, Instance, and Intrinsic Capability.* The results of (1) and (2) from probit. Robust standard errors are in parentheses. ***, ** and * indicate coefficients significantly different from 0 at the 1%, 5% and 10% levels, respectively.

Note 2: A dependent variable is *IMPRISONMENT,* a dummy variable taking 1 if a convicted offender receives an actual jail term and 0 if he/she receives a suspended one.

Note 3: "*Revolving door attorney"* is a dummy variable taking 1 if one of the defense attorneys is an *"Ex-Senior Judge Lawyer"* (ESJL, lawyers with "senior judge" and "senior public prosecutor" experience) who takes cases within the first year of retirement "Senior judge" includes the Supreme Court Justice, high (district) court chief judge, high (district) court senior judge. "Senior public prosecutor" includes the prosecutor general, a chief of high (district) public prosecutor's office, and high (district) court senior prosecutor.

Note 4: "Media Coverage" is constructed based on by the number of news articles covering a defendant from a starting date of investigation to one day before reaching a final verdict. Specifically a dummy variable *Media Coverage* takes 1 if the number of news articles about defendants in question is at least one, and 0 otherwise. An investigation of a case is assumed to begin at 6 months before opening the case.

In Table 3-14, we repeat the baseline regression with an inclusion of "narrowly defined *Revolving door attorneys*" as a new comparison group. Contrary to the widespread allegations that the judiciary strongly favors "narrowly defined *Revolving door attorneys*", they fail to make any difference in sentencing outcomes. To probe such allegations, we split *Revolving door attorneys* into two subgroups: "narrowly defined *Revolving door attorneys*" and "broadly defined *Revolving door attorneys*", defined as "*Revolving door attorneys* but not included in narrowly defined *Revolving door attorneys."*

Column (2) of Table 3-14 shows that observed leniency is entirely driven by "broadly defined *Revolving door attorneys*" in case with no publicity. An immediate interpretation is that judicial connections in question are structural ones rather than individual ones. A more relevant interpretation is that the fact that *Revolving door attorneys* and sitting judges worked together as colleagues on the same courts prior to one's resignation seems to be indicative of corruption. Such situations were often featured in news articles and watchdog groups' reports [39] and finally became subject to regulation. Alternative interpretation is that this result is also the outcome of consideration into career concerns. Knowing that favoring narrow *Revolving door attorneys* may lead to future accusations, judges are likely to treat with caution cases represented by their ex-supervisors.

[39] As explained at Subsection C in Section II, PSPD reports examine how many of those cases that would have fallen into under their previous jurisdictions are assigned to *Revolving door attorneys* during their first year of resignation.

Table 3-14 Comparison Group: "narrowly defined *RDA*"

Dependent Variable : IMPRISONMENT		
	(1)	(2)
Narrowly defined ***RDA***	-.48 (.39)	-.52 (.41)
Narrowly defined ***RDA*** " × Media Coverage	.56 (.52)	.53 (.54)
Broadly defined ***RDA***		-.82** (.38)
Broadly defined ***RDA*** × Media Coverage		-1.06** (.50)
Media Coverage	.40* (.23)	.14 (.27)
Observations	270	270

Note 1: Covariates include the variable C*haebol, Controlling Shareholder, Loss, Instance, and Intrinsic Capability.* The results from probit. Robust standard errors are in parentheses. ***, ** and * indicate coefficients significantly different from 0 at the 1%, 5% and 10% levels, respectively

Note 2: "Narrowly defined ***RDA***" refers to a *"Revolving door attorney"* who takes cases which would have fallen into under his/her previous jurisdictions prior to resignation. "Broadly defined ***RDA***" is defined as *a "Revolving door attorney"* but not included in the narrowly defined ***RDA***. "*Revolving door attorney"* is a dummy variable taking 1 if one of the defense attorneys is an *"Ex-Senior Judge Lawyer"* (ESJL, lawyers with "senior judge" and "senior public prosecutor" experience) who takes cases within the first year of retirement.

Note 3: "Media Coverage" is constructed based on by the number of news articles covering a defendant from a starting date of investigation to one day before reaching a final verdict. Specifically a dummy variable *Media Coverage* takes 1 if the number of news articles about defendants in question is at least one, and 0 otherwise. An investigation of a case is assumed to begin at 6 months before opening the case.

3.7.4 Demand for Revolving Door Attorneys

Our testable hypothesis about demand for *Revolving door attorneys* is that demand is assoicated with the risk of incarceration. Choi, Kang, and Lee (2013) show that for Korean white-collar criminlas, the likelihood of imprisonment is associated with a) the size of losses inflicted by the criminal and b) the fact that an offender is a controlling shareholder of *chaebols*. Following their findings, we employ as proxies for the risk of incarceration, the variables

"Controlling Shareholder, and Loss." In addition, we add to the basic regression the wealth of defendants. This makes sense when considering the high fees of *Revolving door attorneys*. As proxies for wealth of convicted wrongdoers, we use the variable *"Controlling Shareholder, Chaebol, and Survival."*

As Table 3-15 shows, the hypothesis is confirmed by the basic OLS for demand for *Revolving door attorneys* . When the control variables are significant, they have predicted signs, except the variable *Loss*. Furthermore, the Table shows that other proxies for legal representation of defendants such as the number of defense attorneys, the number of ex-senior or ex-junior judge attorneys replicate the results. These findings can be interpreted as evidence that those likely to be subject to harsh criminal sanctions hire *Revolving door attorneys* **.**

These findings are consistent with existing studies on white-collar offenders (Szockyj 1998; Frase 2005; Richman 2013). These studies argue that white-collar offenders are amenable to deterrence due to their rational and profit-oriented motivation. Imprisonment thus effectively deters white-collar crimes. Moreover, it is generally perceived that high-profile white-collar offenders exhibit distress at the thought of incarceration. In sum, white-collar criminals have much stronger incentives to evade jail. These arguments provide reasonable explanations for why high-profile corporate offenders prefer *Revolving door attorneys.*

Relatedly, these findings suggest that the estimates we presented in Subsection A appear to be biased. This selection bias for *Revolving door attorneys*, however, does not undermine our main finding that the influence of connections of *Revolving door attorneys* on sentencing is considerable. On the contrary, it strengthens it. The selection bias tilts the severity of punishment upward, suggesting that *Revolving door attorneys*' clients are exposed to the risk of tougher sanctions. Nonetheless, that convicted offenders pleaded by *Revolving door attorneys* end up

receiving more lenient punishments suggests that the extent of the power of connections could be underestimated. Taken together, it is reasonable to interpret that the estimates presented in Subsection A are lower bounds on the effect of connections on sentencing

Table 3-15 Demand for Quality of Legal Representation

Dependent Variables: Quality of Legal Representation				
	Revolving door attorneys	Ex-Senior Judge Lawyers	Lawyers	TOP-10 Law Firm Lawyers
Chaebol	**.20** **(.09)**	**.52 *** **(.17)**	**.62*** **(.35)**	**1.48*** **(.33)**
Controlling Shareholder	**.20*** **(.11)**	**.48 *** **(.18)**	**1.50*** **(.38)**	**1.14*** **(.37)**
Loss	-.00 (.01)	.01 (.02)	-.04 (.05)	-.04 (.06)
Survival	**.34*** **(.09)**	**.73*** **(.172)**	**1.32*** **(.36)**	**1.68*** **(.34)**
Constant	**.24****	**.82*****	**2.54*****	.34
Observations	270	270	270	270
R2	0.073	0.100	0.095	0.162

Note 1: Results from OLS regressions. Robust standard errors in parentheses. *** significant at 1%, ** significant at 5%, * significant at 10%.
Note 2: "Lawyer" represents private attorneys that each defenant hires."Top-10 Law Firm Lawyer" denotes counsels from a top 10 law firm that each defenant hires. *Revolving door attorney"* is a dummy variable taking 1 if one of the defense attorneys is an *"Ex-Senior Judge Lawyer"* (ESJL, lawyers with "senior judge" and "senior public prosecutor" experience) who takes cases within the first year of retirement "Senior judge" includes the Supreme Court Justice, high (district) court chief judge, high (district) court senior judge. "Senior public prosecutor" includes the prosecutor general, a chief of high (district) public prosecutor's office, and high (district) court senior prosecutor.
Note 3: The variable *Survival* takes on 1 if a firm for whom a convicted defendant works remains in business, and 0 if a firm goes bankrupt during or after a trial. This variable will be employed as a proxy for wealth of defendants.

3.8 CONCLUSION

How much influence do ex-judges (or ex-prosecutors) have on litigation outcomes when they appear as lawyers? This paper has empirically addressed this question using an actual conviction dataset on Korean corporate crimes. Our paper provides strong evidence that connections greatly influence the behavior of the judiciary and the impact of connections is time and media-sensitive.

Our analysis yields insights into how to regulate a nuanced form of influence peddling such as the revolving door situation that is prevalent in public sectors. At a general level, our findings contribute to the understanding of the mechanisms of brokering influence, which is common in developed countries. For instance, in the United States and other European countries, there are growing concerns about the revolving door phenomenon. In Japan, *Amakudari* (the placement of bureaucrats retiring from one of Japan's ministries in public-or private-sector jobs) has long been a subject of attention (Colignon and Usui 2003. *The Economist* 2010). However, the traditional approach to corruption offers little guidance in understanding and regulating this type of influence peddling using connections. If we define corruption as the breaking of a rule by a public official for private gain, *jungwanyeoo* cannot be categorized as judicial corruption; there is neither any money under table exchanged between *Revolving door attorneys* and judges nor any clear violation of the law.

In this respect, our findings have several implications. First, our findings validate "cooling off periods", as an effective method of regulating abuses arising from the revolving door phenomenon (Vidal, Draca, and Fons-Rosen 2012). The shelf life of *jungwanyeoo* suggests that "cooling off periods" could be the appropriate policy measure legislators could enforce.

Second, our findings show that judges avoid seeming to favor *Revolving door attorneys* when faced with outside monitoring, suggesting that an active strategy would be that of establishing mandatory sentencing guidelines in our contexts. This could be effective at checking potential corrupt behavior for two reasons. The guidelines circumscribe a judge's discretion over sentencing. Moreover, the guidelines would lower monitoring costs by making monitoring easier from outside.

Finally, our findings provide useful insights into the institutional design aimed at addressing the revolving door problem in the judiciary. Given the impacts of media coverage on favoritism, it could be effective to establish specialized courts committed to corruption cases so as to draw more public attention to how the courts deal with cases.

We conclude our paper by presenting several issues for future research.

First, our study can be readily extended to analyze the impact of new regulations on *Revolving door attorneys* in Korea. After our sample period, two major policy interventions were made: advisory sentencing guidelines in 2008 and a one-year cooling-off period in 2011. Therefore a natural extension of our work would be to update data and then investigate how *Revolving door attorneys* reacted to changing circumstances.

The second issue relates to a channel through the media environment influences judicial connections. While our findings provide a clear (negative) relationship between media coverage and the influence of connections, not much is known about mechanisms of media attention that constrain the operations of connections. In this paper, we claim that judges' concerns for future careers amplified by media attention may offset the influence of connections. This claim is motivated by many studies that reputation concerns are driving forces for careerist judges (Levy 2005, Alesina and Tabellini 2007), which suggests that even appointed judges may be responsive

to public's preferences owing to their career concerns. This might be especially true for high-level judges whose promotion prospects are largely affected by political factors. Note that the public perception of *jungwanyeoo* is a manifestation of unequal treatment of law. However, our work does not present direct evidence confirming a hypothesis that career concerns of judges played a critical role in curbing favoritism. Therefore, it might be instructive to construct reliable proxies for career concerns and then conduct empirical research.

The final question involves a micro-foundation for favoritism granted to *Revolving door attorneys.* In this paper, we have presented the cultural view on the micro-foundation: deference toward *Revolving door attorneys* is attributed to seniority of civil law. However, it is still not obvious why sitting judges defer to *Revolving door attorneys* who are unlikely to directly affect their promotion prospects. Therefore more serious theoretical analysis is required to answer this question.

As a starting point, it is worthwhile highlighting early retirement practices closely associated with *Revolving door attorneys*. As explained in Section II, senior judges who fail to get promoted tend to retire due to pressure from younger judges. Most of retirees move to the private sector and begin private practice as *Revolving door attorneys*. In this vein, *jungwanyewoo* can be modeled as an implicit contract between senior and junior judges. This implicit contract is mutually beneficial: by adhering to the contact, senior judges are more likely to select early retirement because their sacrifices will be rewarded with the benefit in retirement.

At the same time, keeping this contract benefits young judges, because their promotion prospects improve if *jungwanyewoo* keeps such early resignation practices steady. To this end, juniors favor *Revolving door attorneys* in return. We believe that this explanation might be a first

step in the analysis of a micro foundation a Revolving door situation. This promises to be an exciting and important area of future research.

4.0 CAREER CONCERNS, INFORMATION STRUCTURES, AND THE FORMATION OF BUSINESS GROUPS

4.1 MOTIVATION

Business groups are prevalent in emerging markets and even in some developed economies (Morck 2007; Colpan, Hikino, and Lincoln 2010). Business groups- e.g., the Japanese keiretsu and the Korean *chaebol*- play a significant role in national economies. For example, in Korea, the total sales of the top 4 family business groups (Samsung, Hyundai Motor car, LG, and SK) comprised 49.2 percent of GDP and the total assets of firms controlled by the top 4 families amounted to 43.5 percent of GDP in 2005 (Solidarity for Economic Reform 2009a). Despite a growing body of empirical literature, little theoretical work has been conducted on the formation of a business group. That is, theoretical explorations of a business group are still in the early stages of development. This paper advances a theoretical model for the formation of a business group. Using a career concerns model, we develop a general framework to account for how a business group occurs rather than a conglomerate.

The innovation in our analysis is to shed light on how different corporate structures influence the way CEOs signal their talent to shareholders and the way shareholders estimate managerial talent of CEOs. Many studies (López de Silanes et al. 1999; Claessens, Djankov, and Lang 2000; Faccio and Lang 2002) have centered around the separation of ownership and control in a business group. This separation gives rise to two well-known corporate governance problems; a divergence of interests of a controlling shareholder from those of minority shareholders (López de Silanes et al. 2000) and the entrenchment of controlling owners (Morck,

Wolfenzon, and Yeung 2005). Our model abstracts from specific ownership structures among affiliates of a business group.

Instead, we identify a trade-off between business group and conglomerate corporate structures by focusing on the claim that the sensitivity of turnover to performance appears to be different between the corporate structures. To build intuition behind this claim, let us start by looking at CEO's turnover in a conglomerate. Since a CEO of a conglomerate has only one single channel (i.e., one firm) in which he signals his talent to shareholders, excessive extraction of rents is more likely to end up with job dismissals. These concerns deter a CEO from appropriating high rents from a conglomerate. But a CEO of a business group has multiple channels where he signals his competence to stockholders of constituent firms. Given an environment in which CEO's talent on various tasks is highly correlated, he can receive higher payoffs by extracting the maximum rents in at least one (but not all) firms of a business group. Under a condition in which observed signals (i.e., each firm's performance) are perfectly correlated, even extraction of the maximum rents in one affiliate of the group seems to have little effects on formation of belief about CEO's talent and in turn, on incumbent's retention prospects.

Why? Since shareholders know that each firm's profits are determined by CEO's general skills and rents, and that no firm-specific talent exists, they infer that differences in financial performance between affiliates in the group are totally due to differences in rents extracted from each firm. Thus shareholders of a firm whose performance is poor relative to that of other affiliates appear to place no weight on the firm's performance and to estimate CEO's talent based on other affiliates' better performance. In this respect, shareholders of a business group seem to be biased in favor of the incumbent when estimating his managerial talent because they only consider observations favorable to him.

A conglomerate, however, does not always have stricter disciplining mechanisms. A diversified conglomerate is less transparent than a business group. An increase in diversification of a conglomerate makes it harder for shareholders to monitor a CEO. Moreover, a conglomerate provides aggregate performance measures relative to a business group. Such complexity of an organizational structure creates information loss, resulting in imprecise monitoring. This allows a CEO to extract high rents in a conglomerate.

Our model predicts that CEOs' organizational choices essentially depend on the parameter values used in the model: protection of outside investors and diversification, and precision of monitoring of CEOs. For some configurations of the parameter values, it is optimal to choose a business group, and for other configurations of the parameter values, it is optimal to form a conglomerate.

The remainder of the paper is organized as follows. Section 4.2 reviews the relevant literature. Section 4.3 establishes a general framework for the emergence of a business group and a conglomerate using career concerns model. Section 4.4 discusses some extensions of the basic model. Section 4.5 presents some open questions for further research.

4.2 LITERATURE REVIEWS

This paper builds on various literatures. A career concerns model starts with the seminal work of Holmström (1999). He claims that manager's career concerns induce efficient managerial behavior even if there are no explicit incentive contracts. Dewatripont, Jewitt, and Tirole (1999) present a model in which agents with multi-task seek to manipulate market evaluation of their talent, and apply the model to examine incentives of bureaucrats. Using this

model, Alesina and Tabellini (2007) explore normative principles on the allocation of policy tasks between politicians and bureaucrats. They argue that bureaucrats want to signal their competence for career concerns, while politician for reelection. Thus, politicians are preferred when effort is more important than ability, while bureaucrats are better for technical works in which high-ability is required. In our model, a CEO has concerns for future reputation, but acts as politicians because his primary interest is reappointment in the annual general meeting.

Specific points made in this paper relate to disparate parts of the political economy literature. Our basic approach to a career concerns model draws on Persson and Tabellini's work (2000). In their work, an election plays a crucial role in weeding out incompetent politicians. So politicians who want to be reelected have strong incentives to perform well before the election; incumbents endeavor to make themselves appear competitive by lowering rents they take. We modify their model to account for CEO's managerial behavior in a business group. In our model, the annual general meeting in a firm serves as a mechanism for disciplining manager's rent-seeking. The key differences between our model and that of Persson and Tabellini are as follows: a politician usually regards voting districts as given, whereas a manager chooses a firm's boundary or structure, suggesting that, unlike a politician, a CEO has a way of averting pressure from shareholders and pursuing private benefits of control.

A vast literature on boundaries of the firm has started with Coase's breakthrough work. Grossman and Hart (1996) develop the theory of the firm in terms of property rights. Existing studies have little guidance on a business group because transactions within the group occur between firms. Since a business group is a nexus of firms, transactions within a business group is coordinated through the price mechanism, while controlling shareholders of a business group harmonize transactions via the exercise of power. Thus, property rights view of the firm does not

fully explain how and why a business group happens, rather than a conglomerate.

Khanna and Palepu (2000) argue that a business group serves as substitute for financial and labor markets that emerging countries often lack. They view a family business group as "a mechanism through which intra-group transaction costs are lowered, by encouraging information dissemination among group firms, reducing the possibility of contractual disputes, and providing a low-cost mechanism for dispute resolution." This argument is appealing, but fails to advance a convincing analysis of why business groups are so prevalent in some developed countries with relatively well-functioning markets. Almeida and Wolfenzon (2006) provide new reasoning for pyramidal ownership in a family business group. They seek to explain why families adopt a pyramidal structure to control firms in a business group, rather than a horizontal structure. They argue that pyramids have an edge over horizontal structures in payoffs and financing, especially when diversion is expected to be high due to poor protection of investors. But they explain how ownership structures of a business group will be determined, but not how a freestanding firm transforms into a business group. That is, they do not present any specific model of formation of a business group.

Kaplan, Klebanov, and Sorensen (2012) present empirical findings that confirm the importance of general managerial skills. To explore which CEO characteristics and ability matters, they obtain detailed assessment of 316 CEO candidates for positions in firms funded by private equity investors. They found that general talent such as execution and resoluteness matters for success. They concluded that "CEOs with greater overall talent appear to be associated with better performance." Murphy and Zabojnik (2007) also argue that surges in pay reflect a shift in the importance of "managerial ability" relative to "firm-specific human capital", which operated to strengthen executives' bargaining power by allowing for better outside

options.

4.3 A CAREER CONCERNS MODEL APPROACH

4.3.1 Setup

4.3.1.1 Definitions of a Conglomerate and a Business Group

Before developing a theoretical model of a business group and a conglomerate, it is worth defining a business group and a conglomerate. There are various definitions of a business group (Granovetter 1995; Khanna and Rivkin 2001). In our paper, the definition of a business is the following; a group of two or more legally independent firms under common control. The firms may be listed or closely-held ones, operating in diverse (often unrelated) industries. Common control of the firms is taken through formal (e.g., equity; Chang 2003) and informal (e.g., family ties; Poppo and Zenger 2002) mechanisms. We assume away any specific ownership structures of a business group. This means that member firms in a business group are linked by a common CEO, but not by cross-ownership.

A conglomerate refers to a stand-alone firm operating in diversified areas. A conglomerate may be composed of several firms like a business group, but we assume that these are wholly owned by one core firm, implying that many firms of the conglomerate are one entity from an economic point of view. Both a conglomerate and business group are engaged in multiple lines of business but the former differs from the latter in a corporate structure (Kandel et al. 2013),

This classification seems too simplistic. In fact, the boundary between a business group and a conglomerate is not clear in that the two terms are interchangeably used in many financial literature. The key idea behind this classification is that only one annual general meeting occurs in a conglomerate (if a conglomerate consists of several companies, an annual general meeting occurs only in a parent company), whereas the general meeting of shareholders is separately held in every constituent firm of a business group.

4.3.1.2 Conglomerate with multi-divisions

Consider a three-period model ($t = 0, 1, 2$). Shareholders of a conglomerate are homogeneous and risk-neutral. Their payoff, ω are:

$$\omega = \mu_1 + \mu_2,$$

where μ_t are profits of a conglomerate in period t. We assume that the profits depend on CEO's competence and rents. That is, profits of a conglomerate are:

$$\mu_t = \eta_t - r_t, \qquad (1)$$

where η_t is CEO's talent and r_t are private benefits of control for a CEO. This setup is inspired by many studies (Bertrand, Mehta, and Mullainathan 2002; Bae, Kang, and Kim 2002; Baek, Kang, and Im 2006) that CEO's rent-seeking motives are driving forces for the creation of a business group. In our model, a business group is detrimental to social welfare due to rent-seeking. This is sharply contrast with a view (Khanna and Palepu 1997) that a business group sometimes plays a positive role by making up for some missing institutions in developing

countries.

r_t is constrained to be nonnegative but is assumed to have an upper bound; $\bar{r} < \infty$. The existence of r_t is closely related to weak legal and regulatory protection for public shareholders. Thus, $\bar{r}$ is a parameter to measure how much legal protection is given to minority shareholders. A high upper limit corresponds to poor protection of minority shareholders. For example, good corporate governance and rule of law decrease $\bar{r}$. The existence of a upper limit of rents is one of the most critical assumptions in the model. Without this, the annual general meeting of a firm does not play a role in screening out incompetent managers.

Key properties of a career concerns model are that a measure of CEO's productivity is incompletely known to both himself and shareholders. In our model, η_t is initially is unknown to both shareholders and a CEO. However, they share common prior beliefs about η_t. For concreteness, η_t is assumed to be a random variable with normal distribution having mean $\bar{\eta}$ and variance σ_η^2 (that is, $\eta \sim N(\bar{\eta}, \sigma_\eta^2)$).

In this setting, note that σ_η^2 is a given parameter involving uncertainty in estimation of CEO's talent. When σ_η^2 is low, shareholders can infer CEO's talent more precisely. In the context of our model, σ_η^2 can be interpreted in two ways; difficulty of CEO's tasks and the degree of diversification of both business organizations. An increase in technicality- the degree to which tasks of a CEO require specialized expertise and technical skills- is highly likely to increase σ_η^2. Corporate diversification is also closely associated with higher σ_η^2. When diverse areas of business organizations are associated with a different level of difficulty, then overall variance of tasks also becomes larger as the organizations become more diversified (for politician and bureaucrat, see Alesina and Tabellini 2007).

In our model a CEO makes two different decisions; what corporate structures he will

establish (at time 0) and how much rent he will appropriate for himself (at time 1 and 2). Let *s* be the size of a conglomerate, and p_I be the likelihood that the current CEO will be reelected at the annual general meeting and will stay in the firm through period 2.

A CEO's payoff, *v* is:

$$v = s\,[lnr_1 + p_I\, lnr_2]$$

The payoff solely depends on private benefits accrued to control of a conglomerate. These are intangible benefits, like the power and influence stemming from running a big business group or tangible ones, like money from tunneling. We assume that r_t is CEO's private information. This suggests that shareholders cannot write a contract for optimal rents with a CEO ex-ante because they cannot observe rents. Moreover, private benefits of control are assumed to be proportional to *s*, the size of firms.[40] In a benchmark model, we make the assumption that there exist no economies or dis-economies of scope with respect to rents.

4.3.1.3 Business Group

Consider a business group having two legally independent firms, *i* and *j*. For concreteness, firm *i (j)* is assumed to hold no stake of the firm *j (i)*. In our model, the only way a business group emerges and sustain is to name the same person as a CEO of each member firm,

[40] Some may question whether r_t has the linear relationship with s. A manager of a firm with larger assets enjoys more rents, but large publicly traded companies usually have more well-functioning corporate governance arrangements which prevent him from extracting rents.

which suggests that our model abstracts from specific ownership structures of a business group. Many studies show that most of business groups adopt various control enhancing mechanisms such as pyramidal structures, dual class shares, and crossholdings (for crossholdings Chang 2003). In this respect, this setup seems unrealistic, but this allows us to restrict attention to how a CEO signals his talent differently depending on corporate structures. Shareholders' payoffs of firm *i* of a business group are:

$$\omega^i = \mu_1{}^i + \mu_2{}^i \quad (i = i, j)$$

Like a conglomerate, firm *i*'s profits of a business group are:

$$\mu^i{}_t = \eta_t - r_t \, (i = i, j) \qquad (2)$$

In a business group, shareholders' payoffs of firm *i* solely depend on firm *j*'s profits. Firm *j*'s activities do not have any impact on firm *i*'s financial performance. In other words, there is no externality among constituents within a business group. We assume that both firms' profits are determined by one common factor η, which captures comprehensive elements affecting firms' profits. η can be understood as CEO's general capabilities, rather than firm (or sector)-specific skills required to manage a firm. A rapid rise in CEO pay is indicative of the importance of these general managerial capabilities, a reflection of a shift in the composition of managerial skills required to manage a modern corporation (Murphy and Zabojnik 2004). Many studies about executive compensation show that over the past three decades, general managerial skills (i.e., the

skills transferable across companies, or even industries) become increasingly more crucial for the CEO job, suggesting that the managerial labor market places a relatively less emphasis on certain types of knowledge specific to one particular firm. This trend leads to a dramatic rise in CEO's compensation since 1980s.

For instance, before Meg Whitman was appointed as the CEO of HP, she served as an executive or CEO in diverse companies from the Walt Disney company to e-bay. When HP announced that it named Meg Whitman CEO, it released the following statement to explain why HP chosen her. *"Meg is* ***a technology visionary*** *with a proven track record of execution. She is* ***a strong communicator who is customer focused with deep leadership capabilities***. *Furthermore, as a member of HP's board of directors for the past eight months, Meg has a solid understanding of our products and markets. (*emphasis mine*)".* Speaking on behalf of the board, the executive chairman Ray Lane also told that *"Whitman has* ***the right operational and communication skills and leadership abilities*** *to deliver improved execution and financial performance.* (emphasis mine)"

This example clearly shows that there are CEO's comprehensive and general characteristics to which firms pay attention when recruiting a CEO.

In a business group, a CEO's payoff is:

$$v = \Sigma s^i \, [lnr_1{}^i + p^i{}_I \, lnr_2{}^i \,] \quad (i = i, j),$$

where s^i is the size of firm i, r_t^i are rents that a CEO expropriates in firm i in period t, $p^i{}_I$ is the reappointment probability of an incumbent in firm i.

4.3.2 Timing of the Game

Period 0 (a choice of a corporate structure): a CEO of firm *i* confronts an opportunity to enter a new business area and chooses the boundaries of the firm. To launch a new business, firm A may set up a new firm, firm B (that is, form a business group) or it may create a new division within itself (that is, form a conglomerate with multi-divisions). When the CEO decides to found a new firm, he is assumed to also take control of the newly founded firm, *j* (that is, firm *i* and *j* are under common control exercised by the same CEO). In addition, the combined size of firm *i* and *j* is assumed to equate to that of a conglomerate with the extra division. We normalize the size of the conglomerate to be 1. We assume that the two firms' size is identical. Hence the size of each firm of a business group is 1/2.

Period 1: [conglomerate] In the beginning, the CEO chooses r_1 not knowing his own capability η. Then Nature decides η, and firm *i*'s profits μ_1 are determined according to equation (1). Shareholders can monitor μ_1, rather than r_1 and η, which suggests that shareholder can only observe firm *i*'s profits but cannot know the composition between talent and rents. At the end of period 1, the annual general meeting of a conglomerate is held. In the general meeting, shareholders of firm *i* cast a vote on whether to reappoint the incumbent CEO. If the incumbent wins, he still takes control of firm *i* at period 2. Otherwise, they appoint a new CEO whose talent is randomly drawn from the same distribution. η_o denotes talent of potential opponents in a CEO market. Thus, $\eta_o \sim N(\bar{\eta}, \sigma_\eta^2)$. We assume that competence is a permanent feature: a CEO with competence η in period 1 retains that level of competence in period 2 as well.

[business group] In the beginning of period 1, a CEO chooses r_1^i and r_1^j before the value of η is realized. Nature decides η, and μ_1^i and μ_1^j are determined so as to satisfy equation (2). We assume that μ_1^i and μ_1^j are publicly observed by all the shareholder in a business group. At the

end of period 1, the annual general meeting is held in both firms simultaneously. We assume that shareholders of each firm cast a vote independently. As explained before, if the incumbent is ousted, a new CEO with $\eta_o \sim N(\bar{\eta}, \sigma_\eta^2)$ will be appointed. We assume that competence is a permanent feature: a CEO with competence η in period 1 retains that level of competence in period 2 as well.

Period 2: [conglomerate] The reappointed CEO decides r_2, and then μ_2 is determined as before. The game ends.

[business group] The reappointed CEO who decides to establish a business group chooses μ_2^i and μ_2^j respectively. After decisions are made, then μ_2^i and μ_2^j are determined as before. The game ends.

4.3.3 Characterization of the Equilibrium

4.3.3.1 Conglomerate with multi-divisions

As a benchmark case, we first characterize an equilibrium of the case in which a CEO chooses a conglomerate and analyze how CEO's career concerns motives induce his equilibrium behavior. In period 2, since a CEO knows that there is no more oversight by shareholders, he has no incentives to perform well. Thus he seeks to appropriate as much rents as he can. He sets r_2 to be $\bar{r}$, and after the realization of η, firm A's profits in period 2 are:

$$\mu_2 = \eta - \bar{r}$$

This indicates that higher η allows shareholders to have higher payoffs. Evidently

shareholders prefer a CEO with high η. Shareholders exercise their voting rights in deciding whether to retain an incumbent CEO. Given the fact above, shareholders' equilibrium voting strategy is as follows. Since shareholders can observe μ_1 rather than η or r_1, they seek to estimate incumbent's talent given μ_1 and equation (1), expecting that the incumbent will choose equilibrium rents, r^* (yet to be derived).

$E(\eta \mid \mu 1) = \tilde{\eta}$ denotes expectation of CEO's estimated talent given μ_1.

$$\tilde{\eta} = \mu_1 + r*$$

Given this estimate, shareholders' voting behavior is straightforward. If $\tilde{\eta}$ exceeds the expected talent of potential opponents, shareholders vote for him. If $\tilde{\eta}$ is equivalent to the expected talent of potential challengers, they vote randomly. Otherwise, they oust the incumbent CEO. Let p_I be the probability than the incumbent is reappointed.

$$p_I = \begin{cases} 1 & \text{if } \tilde{\eta} > E(\eta_o) = \bar{\eta} \\ \frac{1}{2} & \text{if } \tilde{\eta} = E(\eta_o) = \bar{\eta} \\ 0 & \text{otherwise.} \end{cases}$$

Given the strategy above, how does the CEO choose r^*? To answer, first calculate the probability that the incumbent keeps control of the firm when choosing r_1:

$$p_I = \text{Prob}[\tilde{\eta} \geq \bar{\eta}] = \text{Prob}[\mu_1 + r^* \geq \bar{\eta}]$$

$$= \text{Prob}[\eta \geq \bar{\eta} - r^* + r_1] = 1\text{-F}(\bar{\eta} - r^* + r_1),$$

where F is the cumulative distribution function of η. In period 1, the incumbent will choose r_1 to maximize his expected payoffs, v:

$$Max_{r_1} [lnr_1 + [1\text{-}F(\bar{\eta} + r_1 - r*)] \, ln\bar{r}] \qquad (3)$$

Equation (3) illustrates a trade-off that the incumbent is facing. High r_1 increases the first period's payoffs, but it, at the same time, it lowers p_I. Knowing this, he attempts to bias the process of inference upward by abstaining from extraction of high rents.

The first-order condition of equation (3) is

$r_1 = \frac{1}{f(\bar{\eta} + r_1 - r_1^*) \quad ln\bar{r}}$, where f is the probability density function of η.

In equilibrium, the CEO's optimal choice of rents should be consistent with shareholders' inference about that choice. Thus in equilibrium $r_1 = r_1^*$.

$$r_1^* = \frac{1}{f(\bar{\eta}) ln\bar{r}}.$$

Since $f(\bar{\eta})$ is the density of the normal distribution of η evaluated at its mean, $f(\bar{\eta}) = 1/\sigma_\eta \sqrt{2\pi}$. This follows that

$$r_1^* = \frac{\sigma_\eta \sqrt{2\pi}}{ln\bar{r}}, \qquad p_I = [1 - F(\bar{\eta})] = \frac{1}{2} \qquad (4)$$

Let what has been analyzed be a 'career concerns' strategy, and v_c be equilibrium payoffs to a CEO when using this strategy in a conglomerate.

$$\nu_c = \underbrace{ln[\frac{\sigma_\eta\sqrt{2\pi}}{ln\bar{r}}]}_{\text{rents at t=1}} + \underbrace{\frac{1}{2}ln\bar{r}}_{\text{rents at t=2}} \qquad (5)$$

As has been shown in equation (4), r^* will decrease with the size of $\bar{r}$. In our model, $\bar{r}$ is the second period payoff to a CEO as long as he is reappointed. Thus high $\bar{r}$ strengthens his incentives to remain his current position, which leads him to choose small r_1 to distort shareholders' assessment of talent upward.

But the effect of high $\bar{r}$ on a CEO's overall payoff is ambiguous. High $\bar{r}$ implies a higher payoff in period 2, and this simultaneously makes a CEO set r^* to be low. This may lower a CEO's overall payoff.

Equation (4) also shows that r^* is getting smaller as shareholders can monitor a CEO's talent more precisely (that is, when σ_η^2 is small). This is because μ_1 is a good indicator of how much talented a CEO is when σ_η^2 is small. Thus a CEO who cares about reappointment attempts to produce high μ_1 by taking low r_1. Note that if σ_η^2 goes to zero, the optimal rents will be $\bar{r}$, rather than 0. If stockholders can observe CEO's talent without any uncertainty, μ_1 would not signal his talent any more. Then, he has no incentives to make high μ_1 in order to influence shareholders' inference procedure. He always chooses $\bar{r}$, and the retention probability is still 1.

As Holmström argues, "in order that there be some returns to the manager for good performance, it must be that present performance acts as information about future performance." Without any uncertainty about CEO's managerial ability, he has no incentive to abstain from excessive extraction of rents. If we introduce a little vagueness over talent (that is, σ_η^2 is just very small, but not zero), he is worried about his future reputation and will not choose the maximal rents.

Equation (4) suggests that a CEO fails to fool shareholders in equilibrium even if he tries to bias shareholders' inference in his favor. Why? Shareholders who anticipate CEO's equilibrium rents adjust belief on η by discounting high μ_1. Thus, the CEO's retention probability is still 1/2, which coincides with the initial belief about talent.

4.3.3.2 Business Group with Firm *i* and *j*

In this section, we will explore an equilibrium of the case in which a business group has two legally independent firms, *i* and *j*. Let us consider the following strategy; a CEO chooses r^{-} in period 1 as if he does not care about reappointment. We call it a 'full-extraction' strategy.

We beg the following question. Can it be optimal for a CEO to follow a full-extraction strategy in any of the two firms of a business group? To answer, we first consider the case in which a CEO takes a full-extraction strategy in a conglomerate. p^F denotes the turnover probability when adopting a full extraction strategy in a conglomerate with multi-divisions. Following the same procedure in the previous section, we can find out the probability that the CEO will be reappointed when choosing r_1,

$$p_I{}^F = 1 - F(\eta^{-} - r^*_1 + r_1)$$

Since we know that the CEO sets $r_1 = r^{-}$ (this is a full extraction strategy), and $r^* \neq r^{-}$,

$$\text{thus } p_I{}^F = \text{Max}\{0, 1 - F(\eta^{-} - r^*_1 + r^{-})\} \quad (6)$$

This indicates that $p_I^F < p_I = 1/2$ (it is due to the fact that $\bar{r} > r^*$). As expected, when the CEO chooses a full extraction strategy, his turnover possibility increases. Now we return to the initial question.

Let us propose the following equilibrium strategy in a business group. In one firm (e.g., firm *i*), the incumbent CEO pursues a career concern strategy explained above, but in the other one (e.g., firm *j*), he uses a full extraction strategy in period 1.[41] We call it a 'hybrid strategy.' As has been already analyzed, when choosing a career concerns strategy, the CEO' will be replaced with the probability 1/2. If the CEO adopts a 'full-extraction strategy' in firm *j*, will the winning probability be less than 1/2?

The answer is no. Calculate the reappointment probability when he implements a full extraction strategy in firm *j* of a business group. Unlike shareholders of a conglomerate, shareholders of a business group can perfectly observe both μ_1^i and μ_1^j. Given a hybrid strategy, stockholders of the group observe two signals about CEO's talent and find that $\mu_1^i > \mu_1^j$. Since the shareholders know that each firm's profits are determined by CEO's general skills and rents, and that $\eta^i = \eta^j = \eta$ (that is, no firm-specific talent exists), they infer that differences between μ^i and μ^j are totally due to differences in rents extracted from each firm. In equilibrium, shareholders of firm *j* conjecture that low μ^j is attributed to a full extraction strategy, rather than to CEO's poor talent. Thus they seek to estimate the CEO's talent conditioning on μ^i, rather than on μ^j. Note that shareholders in our model vote to appoint more competent CEO, not to punish for excessive rent-extraction per se. Thus the reelection probability of the CEO in firm *j* is ½,

[41] Since we assume that the size of the two firms is identical, it does not change our result if a CEO chooses a full extraction strategy in firm A and pursues a career concern strategy in firm B. However, if the size of two firms are not the same, this is not the case. We will address this issue in section 4.4.

which coincides with the reelection probability in firm *i*. Expected payoffs to a CEO in a business group, v_b are:

$$\nu_b = \frac{1}{2}[\underbrace{ln[\frac{\sigma_\eta\sqrt{2\pi}}{ln\bar{r}}] + \frac{1}{2}ln\bar{r}}_{\text{the rents in firm A}}] + \frac{1}{2}[\underbrace{(1+\frac{1}{2})ln\bar{r}}_{\text{the rents in firm B}}] = \frac{1}{2}ln[\frac{\sigma_\eta\sqrt{2\pi}}{ln\bar{r}}] + ln\bar{r} \qquad (7)$$

Comparing v_c with v_b, we reach the following conclusion. A business group offers a CEO higher rents than a conglomerate as long as σ_η is less than the condition that guarantees an interior solution to equation (3).

What is the implication of the condition above? When σ_η is large, reelection prospects are more subject to accident. This weakens CEO's incentives for better performance by taking low r_1. In the extreme case where σ^2_η is very large, the reelection probability may not be much lowered even if he extract $\bar{r}$, suggesting that it may be optimal to set r_1 to be $\bar{r}$, rather than r^*. To rule out this case, σ_η should be less than $\frac{1}{\sqrt{2\pi}}$ [$r$ln $\bar{r}$], which is the necessary condition for an interior solution to equation (3). Once we exclude a corner solution, we will come to the conclusion that a business group always does offer a CEO higher rents than a conglomerate with multi-divisions.

What is the key intuition behind this conclusion? Since a top manager of a conglomerate has only one single channel in which he signals his talent to shareholders, excessive extraction of r_1 harms his future reputation. These concerns may derive r^* down to zero (this will not happen in equilibrium). Specifically, when shareholders can estimate CEO's competence correctly (that is, σ^2_η is very small), he seldom chooses high r_1 for fear of losing control firm *i*.

This is not the case in a business group. A CEO of a business group has multiple channels where he signals his ability. He can get higher payoffs by pursuing the full-extraction strategy in at least one firm of a business group. In this respect, a business group allows for a CEO to make

less sensitive to market pressure because a business group creates space for a CEO by offering more chances to reveal his talent. Shareholders of a business group appear to be biased in favor of the incumbent when estimating his talent because they only consider observation favorable to the CEO. Bad observation has very little effect on formation of belief about a CEO's ability. As a result, the shareholders are worse off even if they have more information about talent. This is analogous to what Prat (2005) dubs as 'wrong kind of transparency,' suggesting that a principal can be hurt from observing more information about her agent.

Why do these paradoxical results occur? This happens because observed signals are perfectly correlated in a business group. In our model, μ_1^i and μ_1^j appear to be two separate signals, but these are perfectly correlated with each other, which suggests that they are jointly determined from one draw of talent.

The underlying intuition is as follows. In a business group, the more the firms' profits depend on CEO's general managerial talent, the more likely shareholders' estimates are to be biased in favor of the incumbent. When firms' performance is excellent, the shareholders think that this is due to the CEO's good managerial skill. If the firms experience bad outcomes, the shareholders attribute this to factors uncorrelated with talent, for example, rents, or bad luck in some cases. But if firms' performance depends on firm-specific managerial capability as well as general capability, this perfect correlation will not be sustained, which results in different outcomes.

4.3.4 A Trade-off between a Business Group and a Conglomerate

In what we have analyzed so far, a CEO has faced no trade-off between a conglomerate and a business group. In our model, a business group is always better for a CEO in that it offers him multiple channels to signal his talent to shareholders, which generates higher rents. If this is always the case, we will observe only one type of a corporate structure around world; a business group. Many studies of corporate governance document that in the U.S. and U.K. a conglomerate is common. To explore this, we will identify the conditions under which different business organizations emerge. A starting point is the recognition that a conglomerate is less transparent than a business group. Morck et al. (2005) argue that "many smaller firms, rather than one huge one, might conceivably allow better monitoring of professional managers by the family." But they do not advance specific rationales for their argument. We offer several rationales for this arguments. As Alesina and Tabellini (2007) points out, multi-dimensionality of tasks is intimately related to a higher variance of ability. An analogous argument can readily apply to diversification of a conglomerate. As a conglomerate becomes more diversified, then overall variance of the tasks is also likely to increase. But note that this also holds in a diversified business group. Thus another rationale is required.

The key idea is that a business group offers disaggregated performance measures, while a conglomerate provides aggregate performance measures, which leads to information loss. Unlike a business group, performance of each business unit of a conglomerate cannot be easily identified from outside. Specifically, the mixture of several business units into one aggregate performance measures is likely to make observed signals noisier. We present two anecdotal evidence supporting our claim; dismantlement of a conglomerate and an issuance of tracking stocks. Over the last two decade, many conglomerates have been dismantled, and focused their

business to their core competencies. For instance, Pfizer, the world's biggest pharmaceuticals company, restructures by spinning off not just its four smaller non-pharmaceutical divisions (nutrition, consumer health, animal health and capsule-making) but also its huge "established products" division.

Empirical literature reports a rise in stock price around announcement of spin-offs (see Hite and Owers 1999). One explanation for this phenomenon is that investors can perceive value more clearly after the spin-off. As Robert Allen, the chairman of AT & T says, "investors couldn't understand the strategy of the combined firm,... (after the spin-offs) investor will clearly understand it now."(Krishnaswamia and Subramaniam 1999)

Another example is tracking stocks whose dividends are tied to a specific division of a conglomerate. A recent study reports a positive abnormal stock return upon the creation of tracking stocks, which suggests that tracking stocks serve as a mechanism for resolving information asymmetries and principal agent problem. (for detail, see Morck et al. 2005) We have claimed that a conglomerate use aggregate performance measures relative to a business group and that such entanglement creates information loss, which results in precise monitoring. To incorporate this claim into our model, we now assume that profits of a conglomerate are:

$$\mu_t = \eta_t - r_t + \varepsilon_t, \qquad (8)$$

where $\eta \sim N(\bar{\eta}, \sigma_\eta^2)$ as before, ε_t is a noisy term with $\varepsilon \sim N(0, \sigma_\varepsilon^2)$, $cov(\eta, \varepsilon) = 0$.

ε_t is a random variable representing a conglomerate's opaqueness. $E(\varepsilon) = 0$ means that aggregate performance measures offers shareholders precise information on average[42], and $cov(\eta,$

[42] If $E(\varepsilon) \neq 0$, this performance measure is biased, suggesting that this measure systematically provide false information to investors. This assumption seems unreasonable.

ε) = 0 indicates that even a diversified conglomerate can be better monitored if it has transparency enhancing arrangements (e.g., tracking stocks or more transparent information disclosure systems), because we assume that a conglomerate's opaqueness is related to aggregate performance measures, rather than its diversification. Except this, everything else is equivalent to the model in the previous section.

Let us characterize an equilibrium. The key differences lie in the inference process of a CEO's talent. Observing μ_1, shareholders can no longer precisely estimate η_1 due to ε. Instead, they can conjecture the sum of η and ε. Using Bayesian inference for normal mean,

$$\begin{aligned} E(\eta_1|\mu_1) &= E(\eta_1) + \frac{cov(\mu_1,\eta_1)}{var(\mu_1)}[\mu_1 - E(\mu_1)] \\ &= \bar{\eta} + \frac{\sigma_\eta^2}{\sigma_\eta^2+\sigma_\varepsilon^2}[\mu_1 - E(\mu_1)] = \bar{\eta} + \frac{\sigma_\eta^2}{\sigma_\eta^2+\sigma_\varepsilon^2}[\eta_t + \varepsilon_t - r_1 - \bar{\eta} + r_1^*] \\ &= \frac{\sigma_\varepsilon^2}{\sigma_\eta^2+\sigma_\varepsilon^2}\bar{\eta} + \frac{\sigma_\eta^2}{\sigma_\eta^2+\sigma_\varepsilon^2}[\eta_t + \varepsilon_t - r_1 - +r_1^*] \end{aligned}$$

p^i_I denotes the probability that the incumbent will be reappointed when monitoring is imprecise due to ε in a conglomerate (superscript *i* denotes imprecise monitoring).

Let us calculate p^i_I

$$p^i_I = \text{Prob}\,[E(\eta_1|\mu_1) \geq \bar{\eta}] = \text{Prob}\,[\eta_1 + \varepsilon_1 \geq r_1 - r_1^* + \bar{\eta}]$$

$$= 1\text{-}G(\bar{\eta} - r_1^* + r_1),$$

where G is the cumulative distribution function of $\eta + \varepsilon$, the sum of two normal.

In period 1, the incumbent will choose r_1 to maximize his payoffs:

$$Max_{r_1}\ [lnr_1 + [1\text{-}G(\bar{\eta} - r* + r1)]ln\bar{r}] \qquad (9)$$

The first-order condition of equation (9) is

$$r_1 = \frac{1}{g(\bar{\eta} + r_1 - r_1^*) \quad ln\bar{r}},$$

where g is the probability density function of $\eta + \varepsilon$. In equilibrium, $r_1 = r^*$.

Since $g(\bar{\eta})$ is a density of the normal distribution of $\eta + \varepsilon$ evaluated at its mean, $g(\bar{\eta}) = 1/\sqrt{2\pi(\sigma_\eta^2 + \sigma_\varepsilon^2)}$.

This follows that

$$r_1^i* = \frac{\sqrt{2\pi(\sigma_\eta^2 + \sigma_\varepsilon^2)}}{ln\bar{r}}, \qquad p_I^i = [1 - G(\bar{\eta})] = \frac{1}{2} \tag{10}$$

G has the same mean, but larger variance than F. Thus we must have

$$r_1^i* = \frac{1}{g(\bar{\eta})ln\bar{r}} \quad > r_1^* = \frac{1}{f(\bar{\eta})ln\bar{r}}$$

The finding above shows that a CEO of conglomerate can extract more rents under imprecise monitoring. Equilibrium payoffs to the CEO are

$$\nu_c^i = \underbrace{ln\frac{\sqrt{2\pi(\sigma_{\eta^2} + \sigma_{\varepsilon^2})}}{ln\bar{r}}}_{\text{rents at t=1}} + \underbrace{\frac{1}{2}ln\bar{r}}_{\text{rents at t=2}} \tag{11}$$

Comparing equation (7) with equation (11), we establish the following propositions.

Proposition 1. *When* $\bar{r}ln\bar{r} > \frac{\sqrt{2\pi}}{\sigma_\eta}[\sigma_{\eta^2} + \sigma_{\varepsilon^2}]$, *a CEO favors a business group over a conglomerate.*

Proof. With $\bar{r}ln\bar{r} > \frac{\sqrt{2\pi}}{\sigma_\eta}[\sigma_{\eta^2} + \sigma_{\varepsilon^2}]$, payoffs to a CEO in a business group exceed those to a CEO in a conglomerate (that is $\nu_B > \nu_C$). Thus, given this condition is satisfied, a CEO always prefers a business group to a conglomerate. □

This proposition contains several implications. First, we confirm a trade-off between a business group and conglomerate under imprecise monitoring. Note that without any noise a CEO always would decide to form a business group, which guarantees him higher rents (as long as r^* is an interior solution).

Once we allow for noise, this is not the case anymore. Even if the condition that r_1 is an interior solution is satisfied, when $\bar{r}\ln \bar{r} < \sqrt{2\pi}/\sigma n\ [\sigma_\eta^2 + \sigma_\varepsilon^2]$, a CEO decides to form a conglomerate. Whether he chooses to form a business group or a conglomerate depends on the parameter values used in our model; $\bar{r}$, σ_η^2, and σ_ε^2.

Second, higher $\bar{r}$ facilitates a business group. This makes sense because a business group allows a CEO to extract the maximum rents in at least one firm of a business group. Payoffs to a CEO of a business group become larger with the size of $\bar{r}$. This helps us better understand why a business group is especially common in emerging markets with weak institutions. In our model, high $\bar{r}$ indicates that the CEO can extracts a considerable amount of rents, which often happens in emerging markets.

Third, irrespective of corporate structures, uncertainty over a CEO's talent (measured by σ_η^2) is a source of rents. As uncertainty over competence become larger, better outcomes occur more accidentally, which makes the link between abstention of rents and higher profits weakened. Knowing this, a CEO becomes less motivated by career concerns, which leads to high r_1.

Finally, a CEO of a conglomerate has an additional source of rents relative to a CEO of a business group; imprecise monitoring due to a noisy signal. Intuitively, as σ_ε^2 becomes higher, signals about talent become less informative. This makes shareholders put less emphasis on observed signals, which weakens the CEO's career concerns motives.

Proposition 1 offers interesting insights into 'conglomerate discount', which suggests diversified conglomerates trade at a discount relative to matched portfolios of pure-play firms. Many finance literature shows that diversification destroys shareholders' value because it often leads to over-investment or misallocation of resources among divisions. In the context of our model, conglomerate discount can be explained in the following two ways. First, as a conglomerate become more diversified, σ_η^2 is likely to increase, which leads to high r_1^*. Moreover, imprecise monitoring allow the CEO to extract more rents in a conglomerate.

Proposition 2. *It is not optimal to implement a full extraction strategy for all the firms in a business group.*

Proof. Suppose that a manager pursues the full extraction strategy in all the firms of a business group. Hence the strategy yields the same financial outcomes across the firms, which are observed by all shareholders of a business group. This implies that he does not take advantage of a hybrid strategy any more. If it is optimal to pursue a full extraction strategy in all the member firms of a business group, this follows that

$$\bar{r} \in \text{argmax } [lnr_1 + [1 - F(\bar{\eta} + r_1 - r^*)lnr^-].$$

However, as we already see, $\bar{r}$ is not the optimal solution to the equation above. □

Proposition 2 explains why not all the firms of a business group exhibit poor performance. Implementing a full extraction strategy in every member firm of a business group cannot be optimal. Thus, a CEO of a business group abstains from excessive rent-seeking in at least one firm of a business group. Hence, performance of several firms of a business group can be as good as a standalone firm. This result is consistent with some empirical evidence. Khanna and Palepu (2000) find that performance of affiliates of the most highly diversified business group exceed those of stand-alone firms in India. Khanna and Rivkin (2001) examine the effect of group affiliation on firm profitability for samples of 14 developing economies and report higher average return on assets among firms of business groups in all countries. Proposition 2 also suggests that there must be variations across firms' performance within the group. This happens because a CEO of a business group extracts the maximum rents in some firms, while not in others. Suppose that a business group adopts a pyramidal structure. This may generate positive effects on the firm at the apex of the pyramid, and negative impacts on other firms (usually, a core firm in the group) that suffer from expropriation under the pyramidal structure.

A recent work corroborates proposition 2. Almedia et al. (2009) explore the relative valuation of the Korean *chaebol* firms. Their findings demonstrate that the group's central firm trades at a discount relative to other public firms in the group. They argue that it is due to shareholders' anticipation of value-destroying pyramidal acquisitions by the central firms.

4.3.5 A Hypothesis on the Relationship between a Business group and its Diversification

Proposition 1 suggests a hypothesis about the relationship between a business group and its diversification. A hypothesis is that when outside investors are protected well (captured by

small $\bar{r}$ and low σ_{ε}^2 in our model) and business areas of firms are focused (captured by low σ_{η}^2 in our model), a CEO can raise rents by forming a business group rather than a freestanding firm.

Why? When shareholders can estimate talent of a CEO almost correctly, he seldom chooses a high r_1 due to career concerns in a conglomerate. In a business group, however, a CEO can raise r_1 by using a 'hybrid strategy'. This accounts for the existence of a business group even in some Western European countries with relatively well-functioning financial markets. Proposition 1 offer a theoretical prediction about the relationship between a business group and its diversification. The prediction is that relative to a business group in emerging markets, a business group in developed countries tends to be more focused. Kandel et al. (2013) document that US business groups were focused in a single sector in the 1930s and 1940s, operating in a small number of industries (often utilities). This historical facts are consistent with our model's predictions.

More empirical works are required to empirically testing the hypothesis above. In this subsection, we offer a preliminary result. Khanna and Yafeh (2007)'s works present nine countries' a business group heterogeneity data'. [43] From their works, we obtain diversification index, which is measured as the number of two-digit industries in which a business group operates (For details, see Khanna and Yafeh 2007). Higher values corresponds to more diversification of a business group. We will this index as an indicator representing σ_{η}^2 . We also find some indices about $\bar{r}$, which represents the degree of protection of outside investors. A series of works by shleifer et al. (1998) provides various measures to indicate how corporate governance arrangements work in the nine countries above. Indicators which we use here are (1)

[43] The nine countries is as follows. Brazil, Chile, India, Indonesia, South Korea, Mexico, Philippines, Taiwan, and Thailand.

rule of law,[44] (2) assessment of efficiency of judiciary system, [45] (3) risk of expropriation,[46] and (4) GNP (measured as a constant dollars of 1994). Higher values of all indicators corresponds to low r^{-}.

If our theoretical prediction makes sense, the correlation among the two indices will be negative. To identify the relationship, we conduct a simple correlation test using the data above. Table 4-1 presents the basic result. Table 1 show that, diversification index displays the negative correlation with r^{-}. This means that poor assessment of rule of law and risk of expropriation is correlated with high degree of diversification. However, efficiency of judiciary system, which is another index of r^{-}, does not show negative correlation with diversification index. Since the number of the sample is limited, and we do not control for some factors that may affect diversification, we do not attempt to generalize the results above. Further careful empirical work is needed to verify the conjecture.

Table 4-1 Correlation between Diversification & Protection of Outside Investors

	Diversification
Rule of Law	-0.124
Efficiency of Judiciary	0.292
Risk of Expropriation	-0.294
GDP	-0.445

44 Assessment of the law and order tradition in the country produced by the country risk rating agency International Country Risk (ICR). Average of the month of April and October of the monthly index between 1982 and 1995. Scale from zero to 10 with lower scores for less tradition for law and order.

45 It refers to shareholder rights, creditor rights, size and breadth of capital markets for 49 countries. These indicates are produced by the country risk rating agency Business International Corp. It may be taken to represent investors' assessment of conditions in the country. Average between 1980 and 1983. Scale from 0 to 10; with lower scores lower efficiency levels.

46 Risk of expropriation ICR's assessment of the risk of "outright confiscation" or "forced nationalization." Average of the month April and October of the monthly index between 1982 and 1995. Scale from 0 to 10 with lower scores for the country risk.

4.4 EXTENSIONS OF THE BASIC MODEL

4.4.1 The Size of Member Firms of a Business Group

In our benchmark model, we assume that the size of firm *i* and *j* of a business group is the same. Now we relax this setting in order to investigate what happens if the size of member firms is different. In our model, we assumed that the size of a firm is closely related to the amount of rents to extract. Thus, the following proposition always holds as long as we keep the assumption above.

Proposition 3. *A full-extraction strategy occurs in a firm whose size is relatively small. Likewise, a career concerns strategy is pursued in a firm whose size is relatively large.*

4.4.2 An Increase in Competence Correlation in a Business Group

Now we relax the assumption that two signals in a business are perfectly correlated. If firm's profits depend on not only general talent but also firm specific skills of a CEO, do our key findings still hold?

The answer is yes. A change in competence correlation influences a shareholders' learning procedure for CEO's managerial capability. To make an analysis manageable, suppose that a business group has only two affiliates, firm *i* and firm *j* and that two firm specific capabilities are highly correlated but not perfectly.

We make two points. The first point is that better financial performance of one firm improves shareholders' estimation of CEO's abilities in the other firm of the group. This makes sense because the two abilities are correlated. The second point is that the marginal impact of firm *j's* performance on estimation of firm *i*-specific competence increases as the correlation increases. In contrast, the marginal effect of firm *j's* performance on estimation about firm *j*-specific talent decreases in the amount of correlation.

The key intuition underlying these observations is as follows. From the perspective of firm *i*'s shareholders, the more correlated are the two competences, the more informative is the firm *j'*s performance about firm *i*-specific competences. The firm *j's* outcomes serves basically as an additional signal about the firm *i*-specific talent. Making this additional signal (i.e., firm *j's* outcomes) more indicative of underlying firm *i*-specific talent is tantamount to deceasing the informational value of the direct observation of firm *i*'s performance. As the correlation increases, shareholders of firm *i* places less weight on their firm's performance relative to that of other firms. This inference procedure happens especially when firm *i*'s financial outcomes are poor.

Let us suppose one extreme case in which the two capabilities are perfectly correlated. This implies firm that is, firm *j'*s performance is a perfect substitute of firm *i'*s performance, leading firm *i'*s shareholders to be biased in favor of the incumbent in spite of poor performance. In this respect, a threat of dismissals is relatively less effective in disciplining a rent-seeking CEO, suggesting that the CEO are entrenched in a business group. At the other extreme case in which the two capabilities are independent each other. In this case, shareholders of each firm care only about their own signal, the same learning procedure for a CEO in a conglomerate.

4.4.3 The Effect of Competitive Markets for CEOs on a CEO's Career Concerns

In this subsection, we will explore the effect of competitive CEO labor markets on their career concerns. There are several ways to incorporate this effect into our model. One way is to assume that potential challengers have the higher expected ability than the incumbent has. Note that η_o denotes talent of candidates in the relevant CEO markets. We assume that $\eta_o \sim N(\hat{\eta}, \sigma 2)$ and that $\hat{\eta} > \bar{\eta}$. $p_I{}^{\eta o}$ denotes the incumbent's retention likelihood when opponents have $\eta_o \sim N(\hat{\eta}, \sigma^2_\eta)$. Given the conditions above,

$$p_I{}^{\eta o} = \text{Prob}[\tilde{\eta} \geq \hat{\eta}] = 1\text{-F}(\hat{\eta} - r_1 + r_1),$$

where F is the cumulative distribution function of η.

Since we assume that $\hat{\eta} > \bar{\eta}$, $1 - F(\bar{\eta} - r_1{}^* + r_1) = p_I > p_I{}^{\eta o} = 1 - F(\hat{\eta} - r_1{}^* + r_1)$, which suggests that the incumbent's reelection prospects diminish as $\hat{\eta}$ becomes higher. As long as the annual general meeting serves as a mechanism for screening out a less competent CEOs, the more competitive markets for CEO are, the higher profits are.

There is another rationale for why competitive markets for CEOs matters in order to rein CEO's rent-seeking behavior back. With imprecise monitoring, when uncertainty about CEO's ability increases, well-functioning markets for CEOs deter him from extracting high rents, but under the same condition, underdevelopment of these markets allows him to appropriate high rents. See a conglomerate under imprecise monitoring. Suppose that a conglomerate decides to discipline a CEO through a wage contract instead of an annual retention vote. For concreteness, at the beginning of period 1, a conglomerate makes a wage offer, y, in order to recruit more competent candidates such that $y = \boldsymbol{E}\,(E(\eta \mid \mu_1))$, where let $\boldsymbol{E}$ be unconditional expectations

over μ_1, and let E be expectations over η conditioning on the realization of μ_1. As assumed earlier, no annual general meeting exists at the end of period 1. Everything else coincides with the setup in the previous section. In this setting, the CEO's overall payoff is

$$v = [lnr_1 + lny + lnr_2]$$

In period 1, the incumbent will choose r_1 to maximize his payoffs:

$$Max\ r_1\ [lnr_1 + lnE\ (E(\eta \mid \mu_1)) + ln\bar{r}]\ \ (12)$$

Since we already know that

$$E[\eta \mid \mu_1] = \frac{\sigma_\varepsilon^2}{\sigma_\eta^2 + \sigma_\varepsilon^2}\bar{\eta} + \frac{\sigma_\eta^2}{\sigma_\eta^2 + \sigma_\varepsilon^2}[\eta_t + \varepsilon_t - r_1 - + r_1^*]$$

The first-order condition is

$$\frac{1}{r_1^*} = [\frac{\sigma_\eta^2}{\sigma_\eta^2 + \sigma_\varepsilon^2}]\frac{1}{\bar{\eta}}$$

r_1^m* denote equilibrium rents under competitive markets for CEOs

$$r_1^m* = [\frac{\sigma_\eta^2 + \sigma_\varepsilon^2}{\sigma_\eta^2}]\bar{\eta} = \frac{1}{\phi}\bar{\eta}, \qquad (13)$$

where $\phi = [\frac{\sigma_\eta^2 + \sigma_\varepsilon^2}{\sigma_\eta^2}]$ is a signal extraction result.

This result provides several implications. First, the optimal $r*$ does not depends on $\bar{r}$ any more, which means that $\bar{r}$ does not change the CEO's equilibrium behavior. Second, higher

talent raises the CEO's payoffs via two channels; he will receive a higher wage according to the wage contract, and he will extract more rents in period 1. But the effect of higher talent on shareholder's welfare is unclear. Clearly, higher expected talent boosts μ_2, but it reduce μ_1 by allowing the CEO to extract high r_1^*. The most fundamental results emerge when σ^2 becomes higher. Suppose that markets for CEOs are very competitive, which implies that everyone can track and find all the records of candidates performance and their career profiles. This makes our model one of infinitely repeated games, in which a CEO with career concerns never chooses $\bar{r}$ even in any period. Since firms seek to recruit candidates with past good performance, abstention from extraction of excessive rents will be rewarded by better future job offers. This benefit can be also captured by $y = \boldsymbol{E}\,(E(\eta \mid \mu_1))$, which represents implicit wages offered by markets for CEOs. Comparing (10) with (13), we present the following proposition.

Proposition 4. *With imprecise monitoring, an increase in difficulty of a CEO's tasks generates the opposite results depending on whether markets for CEOs work well. With competitive markets for CEOs, higher* σ_η^2 *decreases* r_1^**, whereas with poorly-working markets for CEOs higher* σ_η^2 in*creases* r_1^**,*

What makes these differences? This happens because a CEO' objective function dramatically changes as the markets become more competitive. With markets for CEOs functioning poorly, the only goal of the incumbent is to be reelected in a current firm, which happens if his estimated talent just exceeds potential rivals' expected ability. With markets for CEOs working well, present performance is regarded as information about future performance. Knowing this, the incumbent seeks to appear as competent as possible to establish better

professional reputation in relevant markets for CEO. As Alesina and Tabellini claim, "if σ_η^2 becomes larger, this leads to an increase in φ, the signal to noise ratio", suggesting that observed firm's profits become a better signal about CEO's talent. Since a CEO seeks to maximize perceived talent, he abstains from excessive extraction of high rents. This is not the case with a CEO when the markets are underdeveloped. As σ_η^2 becomes higher, reelection is less tied to talent, because it is more subject to randomness, which dampens career concern motives. Thus, he attempts to extract more rents, rather than to pretend to be more talented. In other words, a CEO strives to attain a threshold level of η, rather than to maximize his perceived ability.

4.5 CONCLUSION

This paper offers theoretical explanations as to how monitoring and disciplining of a CEO in a conglomerate differs from that of a business group's CEO. In this paper, we especially compare turnover of a CEO of a business group to turnover of a CEO of a comparable conglomerate. Under a specific circumstance where a market for CEOs places a heavy emphasis on general managerial talent rather than firm specific expertise (in out context, CEO's firm-specific talent is highly correlated), replacement of a CEO of a business group seems to be less sensitive to poor performance of at least one of affiliates of the group.

A conglomerate structure, however, does not always have a stricter disciplining mechanism. A diversified conglomerate tends to be less transparent than a business group because the conglomerate fails to provide appropriate division-level performance measures. The conglomerate usually offers information on aggregate performance that contains limited

information about talent of a conglomerate's CEO. This suggests that firm performance is a noisier signal of talent, allowing a CEO to extract high rents from a conglomerate. In conclusion, CEOs' organizational choices are determined by the parameter values used in the model: protection of outside investors and diversification, and precision of monitoring of CEOs.

Our model presents a rationale for why some business groups exist even in Western European countries with well-functioning financial markets. We claim that with better legal protection of investors and precise monitoring mechanisms of a CEO (in our context, less uncertainty about talent), a CEO can increase his rents by choosing a business group. This claim generates theoretical predictions of the relationship between a business group and its diversification. In particular, relative to a business group in emerging markets, a business group in developed countries tends to be more focused.

Finally, our model suggests why competitive CEO labor markets are key to rein their rent-seeking behavior back. With imprecise monitoring, when a CEO carries out more technically demanding tasks (in our model, this is captured by larger σ_η^2), development of the CEO markets keeps him from extracting high rents, but underdevelopment of the CEO markets allows him to pursue high rents. This happens because a CEO's objective function dramatically changes as the markets for CEOs become more competitive. High turnover rates lead CEOs to be concerned more about their reputation in the markets.

We conclude by posing some open questions for future research.

First, we have assumed that σ_η^2 is an exogenously given parameter. If we interpret σ_η^2 as a parameter related to diversification, we can establish a model in which a CEO decides the degree of diversification as well as corporate structures; the optimal diversification of each corporate structure.

Second, our model abstracts from specific ownership structures of a business group. Thus, the size of a firm is the only factor deciding whether to extract excessive extraction of rents from it. Once we allow for specific ownership structures in the basic model, we can address tunneling problems, which is defined as the transfer of assets and profits out of firms to firms which are directly owned by controlling shareholders. This setup makes a CEO pursue a full-extraction strategy more strategically. If a family takes control of a business group by a pyramid, a family is likely to implement a career concern strategy in a 'core firm', a firm that takes control of other firms in a pyramid. Moreover, tunneling from other member firms to a core firm also occurs to please core firm' shareholders, which raises the reelection probability in the firm.

Finally, we need to make a more rigorous model to see what happens when signals are partially correlated. This model will allow us to examine how an increase in competence correlation affects which corporate structure is optimal for shareholders.

5.0 CONCLUDING REMARKS

This dissertation has attempted to sketch out economic organizations, the judiciary, and their interactions in the context of South Korea.

The first chapter has reported sentencing slant in favor of *chaebols*. Convicted *chaebol* defendants are much more likely to be given leniency relative to non- *chaebol* defendants. I empirically study the source of sentencing disparities. The result shows that observed leniency towards convicted *chaebol*-related offenders is a combination of concerns for economy-wide consequences of harsh sentences against tycoons and judicial hesitancy in civil law to restrict self-dealing in *chaebols*. The second chapter has empirically investigated revolving door phenomena in the judiciary by examining whether connections influence sentencing decisions. I find that judicial connections have a substantial effect on sentences: convicted corporate offenders defended by *revolving door attorneys* are more likely to be given leniency than those by other ordinary attorneys. I also find that the effect exhibits a huge discontinuity around the first year of exit of *revolving door attorneys* from the judiciary. Lastly, observed leniency disappears when cases are subject to media attention. Taking into account these observations, the second chapter presents causal relationship between judicial ties and lenient criminal sanctions.

The final chapter has attempted to analyze a variety of trade-offs between business group and conglomerate corporate structures by focusing on how different the way a CEO signals his ability is and as a result, how different turnover of a CEO is with respect to corporate structures. The key claim is that if markets for CEOs place more weight to general managerial talent rather than firm specific knowledge, a CEO of business group can choose the hybrid strategy where he extracts the maximum rents in at least one(but not all) firms of the group. In this respect, a business

group allows a CEO to be shielded from market disciplines. But a diversified conglomerate is generally more subject to imprecise monitoring due to its complicated structures and irrelevant performance measures, allowing a CEO to appropriate more rents from a conglomerate.

This dissertation concludes by mentioning future research topics related to each chapter. The first chapter leaves one interesting topic for future research. Many studies show that family control is common around the world and contributes to national economy, suggesting that many other countries are likely to be confronted with similar problems, suggesting that our studies require further cross-country work.

The second chapter also leaves several problems to be tackled.

First, our study can be readily extended to analyze the impact of new regulations on *Revolving door attorneys* in Korea. After our sample period, two major government interventions were made: advisory sentencing guidelines in 2008 and a one-year cooling-off period in 2011. It remains to be seen how *Revolving door attorneys* responded to new circumstances.

The second issue relates to a channel through the media affects judicial connections. While our findings provide a clear (negative) relationship between media coverage and the impact of the connections, not much is known about mechanisms of media attention that limits the operations of connections. Empirical investigations need to be made with regard to this issue.

The last question involves a micro-foundation for favoritism granted to *Revolving door attorneys*. In this paper, it is still not obvious why sitting judges defer to *Revolving door attorneys* who are unlikely to directly affect their promotion prospects. Therefore more serious theoretical analysis is required to answer this question.

The final chapter poses some open questions for future research. First, we have assumed that σ_{η}^{2} is an exogenously given parameter. If we interpret σ_{η}^{2} as a parameter related to

diversification, we can establish a model where a CEO decides the optimal degree of diversification as well as corporate structures.

Second, our model abstracts from any specific ownership structures of a business group. Once the model relies on specific ownership structures, further discussion about tunneling problems can be possible: how the structure is related to CEOs' rent-extraction strategies.

Last, but not least, we need to establish a more rigorous model to see what happens when two signals are partially correlated. This model will allow us to examine how an increase in competence correlation affects which corporate structure is better for shareholders.

APPENDIX

Table A 1 The Summary Statistics of Key Variables

	No. of observations	No. of " 1" values	Mean	Median	S.D.	Min	Max
IMPRISONMENT	270	76				0	1
IMPRISONMENT LENGTH	270		32.9	30	13.8	0	96
IMPRISONMENT LENGTH (actual time served)	76		45.0	36	17.9	18	96
Chaebol	270	155				0	1
Controlling Shareholder	270	133				0	1
Size of Loss	270		22.679.9	0.1	241.9	0	2,817.6
Survive	270	133				0	1
Publicity	270		6.2	0	20.7	0	177
Ex-senior judge Attorney	270		1.8	1	1.6	0	9
Revolving door Attorney	270		0.6	0	0.8	0	6
Lawyers	270		4.1	3	3.1	1	18

Note: "Loss" is measured by court's determination of the monetary value of harm that a defendant has caused. (unit: USD million). "Publicity" is constructed based on by the number of news articles covering a defendant from a starting date of investigation to one day before reaching a final verdict. "Lawyer" represents private attorneys that each defenant hires. "Ex-Senior Judge" represents counsels with "senior judge" experience that each defenant hires. "Senior judge" includes Supreme Court Justice, High (District) Court Chief Judge, High (Disctrict) Court Senior Judge. *Revolving door attorney"* denotes an ex- senior judge counsel who takes cases during the first year of retirement. The variable *Survival* takes on 1 if a firm for whom a convicted defendant works remains in business, and 0 if a firm goes bankrupt during or after a trial.

Table A 2 The List of Top 10 Law Firms in Korea

Top 10 law firm in Korea	
KIM & CHANG	http://www.kimchang.com
BAE, KIM & LEE LLC	http://www.bkl.co.kr
LEE&KO	http://www.leeko.com
YOON&YANG LLC	http://www.hwawoo.com
SHIN & KIM	http://www.shinkim.com
YULCHON	http://www.yulchon.com
BARUN LAW	http://www.barunlaw.com
HWANG MOK PARK	http://www.hmpj.com
KCL	http://www.kcllaw.com
LOGOS	http://www.lawlogos.com

Table A 3 Judicial Organizational Structure in Korea

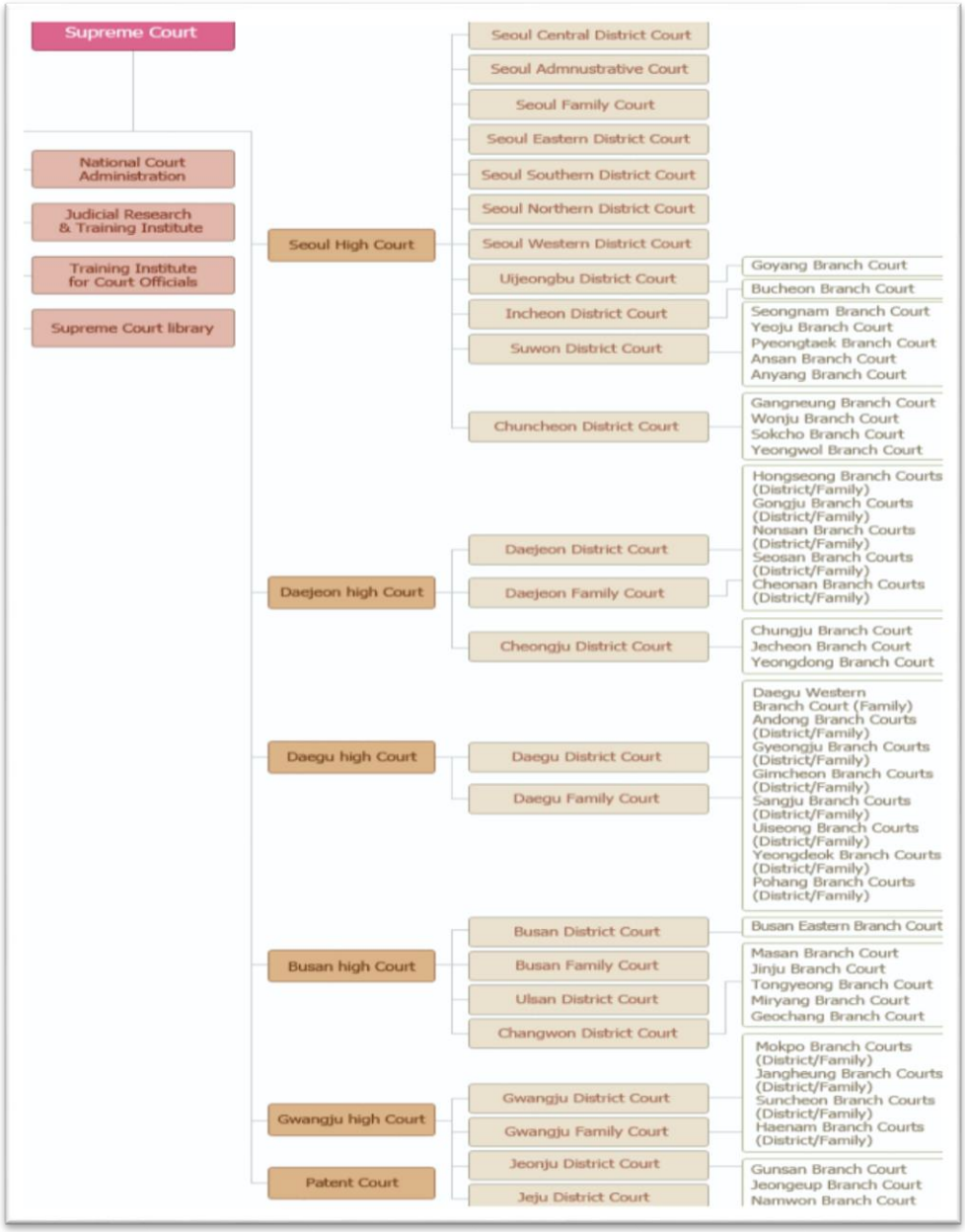

Table A 4 Public Prosecutorial Organizational Structure in Korea

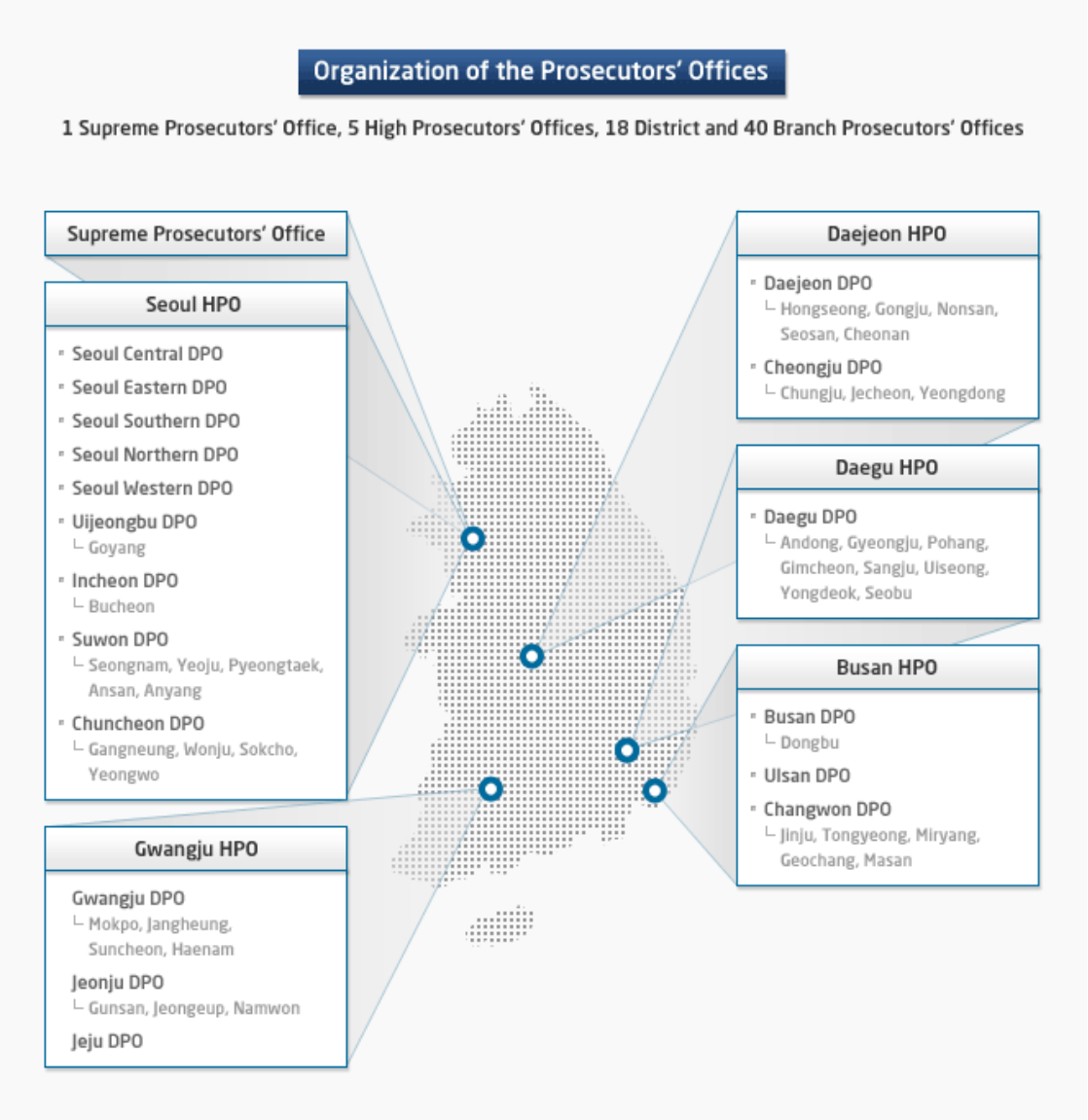

Table A 5 List of Firms in our dataset

COMPANY	
CHAEBOL	**NON-CHAEBOL**
DONGBU	SUNGWON E&C
DONGBU E&C	DONGA Mutual Savings and Finance
SK C&C	ICOLS
SK	HAPKYUNG
HAITAI Electronics	JIHAN Data Tech
NEWCORE	KABOOL Telecom
DONGHYUN Engineering	C&M Communication
SINHO Paper	HANCI Netech
HANSOL Telecom	CHOONGANG Paper
DAEWOO	BAEK SONG CONSTRUCTION
GLOBAL LOGISTIC	DOREMI MEDIA
HANSOL I Ventures	SEWON DEPARTMENT STORE
SINHO	KOREATENDER
KOHAP	JINDO E&C
DOOSAN Heavy Industry	HUMANCOM
BOOYOUNG	KEMONGSA
Doosan Engineering & Construction	Korea First Venture Capital Corporation
DOOSAN	SBI Investment KOREA
SSANGYONG CEMENT INDUSTRY	SGP
DAESANG	ACE DIGITECH
KOREA Petrochemical	FOCUS
HANSOL Development	DONGYANG STEEL PIPE
KOREA Express Corporation	FREECHAL
NAMGWANG E&C	Daemyoung construction
DONGSUH Security	Terra Corporation
HANSHIN CONSTRUCTION	DAEDONG WOOD Corporation
GURPYONG	BILLTRO
Kukdong Engineering & Construction	Regent Security Corp.
DONGA E&C	NANSAN E&C
MANDO	HEUNG CHANG
SK Global	KUNYOUNG
DONGKUK STEEL MILL	NASAN
HANSHIN CONSTRUCTION	GOLDBANK
SSANGYONG CONSTRUCTION	BAEK SONG CONSTRUCTION
DONGA	ASIA Merchant Bank
JINRO	SAMHEUNG
Shin Dong Ah	TURBOTEK
Halla Corporation	WOOBANG
Halla E&C	HANGIL Merchant Bank
DAEWOO MOTOR SALES	Tiger Pools

CORPORATION	
DAEWOO	SE POONG
NEFS	SM
DOOSAN	DOREMI MEDIA
DAEWOO MOTOR	MCI KOREA
HAITAI Group	Good Money
SSANGYONG E&C	Dogwang
LOTTE E&C	
DONGA	
HAITAI	
HYUNDAI MOTOR	
SAEHAN	
Samsung EVERLAND	
GLOVIS	
HYUNDAI Security	
Hyundai Development	
HANSOL	
KOLON TNS	
POSCO	
Hyundai Construction	
Hanwha Security	
Hyosung	

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